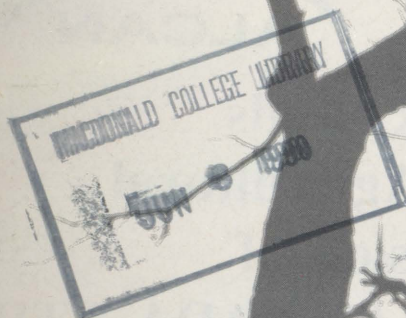


THE Macdonald JOURNAL

SPRING 1998

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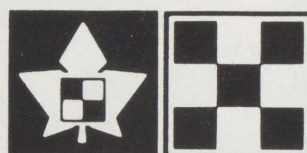
Faculty Name Change:
Faculty of Agricultural and Environmental Sciences

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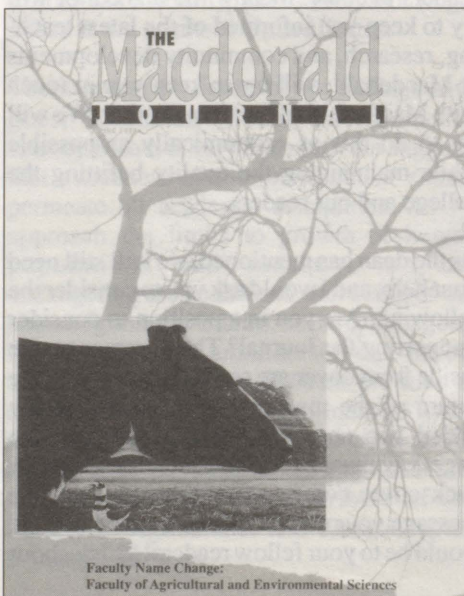
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Cover

When I first saw a reproduction of the painting "The Awakening," by Anthony John which is featured on our cover, I knew I wanted a copy. It so strikingly depicts the co-existence of agriculture and wildlife in a healthy environment. Pictorially, it is agricultural and environmental sciences - the faculty's new name. My grateful thanks to the artist Anthony John and to Wildlife Habitat Canada for their kind permission to reprint "The Awakening." Anthony John is a university graduate in Wildlife Biology and now farms near Sebringville, Ont. Posters of "The Awakening" may be obtained by sending \$12.00 to Canadian Wildlife Associates, 363 West River Road, Ayr, Ontario, N0B 1E0. (519) 746-4600. Please turn to page 13 for a brief look at the work of Wildlife Habitat Canada. Our special features focus on the "Environmental Sciences" in our new name. Our thanks to Dr. Harvey Mead, Ministère de l'Environnement, for his thought-provoking column which complements the articles extremely well. May I direct your attention also to the page opposite and a new Supporter: Alcan. Our sincere thanks to Alcan for their contribution to the Journal.

From The Dean's Desk



In the first of what will be a regular column from my office I will address two issues.

First and foremost, I would like to thank you, all of our subscribers, alumni, advertisers, sponsors and, in particular, Hazel Clarke, for your efforts in putting *The Macdonald*

the core of *The Macdonald Journal* team and with your ongoing support, the future of *The Macdonald Journal* hasn't looked better in years. I do, however, take this opportunity to ask each of you to solicit two new subscribers and to seek new supporters and advertisers for the Journal.

Journal on a more realistic financial basis. I would also like to thank Laurie Baker of our Department of Agricultural Economics for lending his expertise to the Journal vis a vis its financial management over the next three years. With Hazel and Laurie forming

Second, I am extremely pleased to inform you that on January 22, 1990, the Board of Governors of McGill University approved a recommendation from Senate that McGill's Faculty of Agriculture change its name to the Faculty of Agricultural and Environmental Sciences. By approving this name change the university is recognizing the activities that have been taking place at Macdonald College since it was founded (Dr. John Brittain was appointed as Professor of Nature in 1907) and is helping us realize our future aspirations. It also enables us to convey much more accurately to prospective students and the public at large the teaching and research activities of Macdonald College.

Once again, thank you for your efforts.

Dr. Roger B. Buckland
Vice Principal (Macdonald College)
Dean, Faculty of Agricultural and Environmental Sciences

Journal Jottings

I have revived Journal Jottings, last seen in the May 1982 issue of the Journal, in order to add my own words of thanks to those of Dean Buckland's. Thanks for the letters, the telephone calls, and the financial contributions. Thanks to all the readers, the faculty, the graduates, and the Graduates' Society who showed support for the Journal. As you will read further on in this issue, a graduate of Macdonald College has established a \$10,000 endowment fund for *The Macdonald Journal* with the hope that others will add to this fund. A very special thank you for this tremendous vote of confidence: we will try hard to live up to your expectations.

I am delighted with the decision to keep the Journal in print, and hope that with your help we can place the magazine on a sound financial footing for future years, editors, and

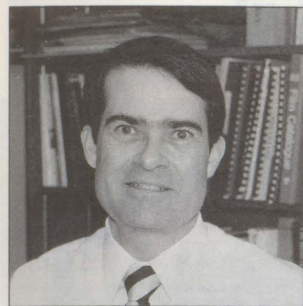
readers to come. Meanwhile this editor will try to keep you informed of the latest teaching, research, and community developments at Macdonald, will try to keep you in touch with Macdonald and with each other. We will try to do this as economically as possible while maintaining the quality befitting the college and our readers.

As the dean has mentioned, we will still need your help, and I would ask you to consider the following: Are you in a position to consider Supporting the Journal? Those names on the inside front cover are so vital to us and to the future of the magazine. We have recently added two new Supporters' names to the page. My thanks to them for their support. A back cover colour advertisement - what a message your company's name on that page would be to your fellow readers! Think about

it. If you or your company advertise in any other media, why not consider adding the Journal to your list? Our readership is select. What's "IN?" in the 1990s? Your business card! It's "IN" to be in the Journal. It's your magazine: let everyone know. From Supporters to gift subscriptions - all are necessary; all are welcome. For rates or other information, please telephone or write to me. *The Macdonald Journal*, Box 284, Macdonald College, 21,111 Lakeshore Rd., Ste. Anne de Bellevue, Que., (514) 398-7704 Fax (514) 398-7955.

Hazel M. Clarke
Editor, The Macdonald Journal

Our Faculty's New Name



by Dr. Rodger Titman
Associate-Dean, Academic and Student Affairs

Slightly over one year after our faculty voted overwhelmingly to change its name to the Faculty of

Agricultural and Environmental Sciences, McGill's Board of Governors gave its formal approval. In the interim, we had to convince the university's Academic Policy and Planning Committee and Senate that indeed we are actively involved in the environmental sciences, that we plan to expand our involvement in this area, and that we recognize that we do not hold exclusive academic jurisdiction over environmental studies within the university. Strong research and teaching programs certainly exist elsewhere in the university, for example, in the Faculties of Science, Engineering, and Medicine. Just in case you think that we are trying to cash in on a topical fad, you may be interested to know that a similar attempt to change our name failed almost 20 years ago.

The name change has brought excitement to our staff - particularly those working in areas not strictly associated with production agriculture - in two ways: 1) it recognizes current environmental activities, and 2) it quickly indicates to the world outside our gates that programs of study concerned with the environment are offered at Macdonald College.

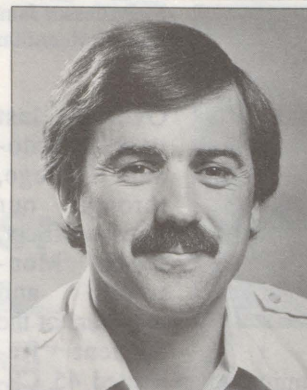
Research is being done in many diverse areas: agrometeorology, environmental toxicology, fisheries biology, entomology, hydrology, soil erosion, resource economics, effects of acid precipitation on soils and trees, pest management and the development of bioherbicides, nitrogen fixation, sustainable agriculture, and wildlife ecology including studies of reptiles, amphibians, birds, terrestrial and arctic marine mammals. In this issue of *The Macdonald Journal* we look at the work of some of the units and individuals involved in environmental studies. Other involved staff give us their thoughts on the faculty's new name.

Our teaching programs reflect our long standing commitment to creating and maintaining a healthy environment. We offer 45 undergraduate and 20 graduate courses and seven formal programs of study in the environmental sciences. Two of these programs, or majors, are interdisciplinary — Environmental Biology and Pest Management — while the remainder are associated with specific departments — Applied Zoology (Entomology), Microbiology (Microbiology), Resource Conservation and Wildlife Resources (Renewable Resources).

A minor in Ecological Agriculture is offered by the Department of Entomology. The faculty is in the process of creating new majors in Environmental Forestry and Soil and Water Conservation which will replace the present Resource Conservation major. Beyond these structured curricula, students enrolled in "agricultural" majors may still take "environmental science" courses as part of their programs or as electives. Among our exciting offerings are courses dealing with the health risks of toxicants, the cultural ecology of human nutrition, insect control, the natural history of vertebrate animals, conservation law, environmental impact assessment, methods of environmental interpretation, and desert ecology, the latter being a three-week field trip led by Professor Roger Bider to the southern United States.

I believe that the theme of our distinguished guest columnist (Focus Environment), Harvey Mead, is very *a propos*. He suggests that awareness of the environment should permeate all academic disciplines. As we approach the limits to growth of human populations and industry, we are endangering the health and well being of our planet. Ignorance is bliss, as the saying goes, but if sufficient numbers of our fellow humans are not informed about the state of our environment and how to manage it, the next generation will suffer and curse us for our complacency. We do not anticipate that complacency will be an attribute of the Faculty of Agricultural and Environmental Sciences. ■

Faculty's New "Look"



by Dr. David M. Bird,
Director,
Raptor
Research
Centre

As one of the four professors of Wildlife Biology, I cannot tell you how delighted I am

at the new "look" of the Faculty of Agriculture, now called the Faculty of Agricultural and Environmental Sciences. I emphasize the word "look" because we anticipate that the name change will result in other transformations at the college focussing on the environment. Certainly a name is not enough.

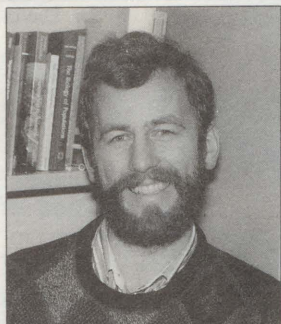
Ever since I came to Macdonald College in 1973, I have always felt that "wildlife" was somewhat of a fringe activity of the faculty. Yes, we could justify our existence at Macdonald College, but we were perhaps expendable too. Now "wildlife" is right in the thick of things and I really feel at home!

Wearing my other hat as a journalist/broadcaster dealing with people at the grassroots level, I had no difficulty witnessing the tremendous ground swelling of the environmental movement. And while politicians seem content to remain light-years behind public opinion, it pleases me that educational institutions like Macdonald College of McGill University are right in step.

After 17 years of surviving on handouts, the Raptor Centre, too, is benefitting from the new focus on the environment by the faculty. A fully equipped laboratory, and a new mobile home as an administrative centre are now becoming a reality instead of a far-off dream!

Finally, allow me to make a prediction. By the end of this new decade, the number of students enrolled in agricultural versus environmental sciences at Macdonald College will be equal, if not higher in the latter category. ■

Student Recruiting and the Faculty Name Change



by Professor James W. Fyles

Student Recruitment Committee member and Assistant Professor, Department of Renewable Resources

Over the last year, Macdonald College, through our Liaison Officer, Linda Montreuil, and members of the Student Re-

cruitment Committee, has visited 45 CEGEPs in Quebec and a host of high schools, colleges, and universities across the country to tell prospective students about the excellent academic programs and high quality of student life to be found at Mac.

Environmental issues have a very high profile in society today, and everywhere we go

students, parents, and teachers ask us whether we have academic programs in environmental science. Macdonald has always had an environmental focus, but with the new faculty name that focus is immediately clear. No explanation is required. Within the context of a CEGEP visit, when we often have less than 10 seconds to catch a student's interest or lose it, this makes our job that much easier because it brings us directly to the point. And the point is that, with its range of disciplines and academic programs, its long history of environmental science within the context of agriculture, and its growing expertise in environmental fields outside of agriculture, Macdonald is an excellent place for any student who is interested in studying the environment. ■



Students at John Abbott CEGEP discuss Environmental Sciences with Professors Benoit Côté and David Lewis.

Graduate Employment Opportunities

by Professor James W. Fyles

Department of Renewable Resources

Macdonald College has been providing students with the background required to compete successfully for jobs in environmental science disciplines for many years, and our graduates now hold positions throughout Canada and abroad. Students such as Michel Champagne, who now teaches Soil Conservation at ITAA in La Pocatière, Stephen Burgess, who completed his BSc and MSc degrees at Macdonald and now works with the Ministry of Energy, Mines and Resources in Ottawa, and Patricia Weaver, who works at the Museum of Man and Nature in Manitoba, began their careers in environmentally oriented programs at Macdonald.

The new faculty name can only improve the employment prospects for graduating students, first, by making potential employers immediately aware that they can look to Macdonald to provide highly trained professionals with expertise in environmental fields, and second, by challenging the college to develop courses and programs which offer students the best possible education in environmental science. Already the offerings in our environmental fields are being reevaluated to identify areas which can be expanded or improved, and to develop a coherent and flexible program which will meet the needs of a wide variety of students.

The employment market in environmental fields, as in many others, has always been very competitive. With increasing public awareness of environmental issues, and greater demands on government and industry to increase activity in this area, opportunities for environmental science graduates are expected to expand in the future. In any employment market, however, the best jobs go to the best candidates. We at Macdonald are committed to provide our students in environmental sciences with a background that will give them the competitive edge. ■

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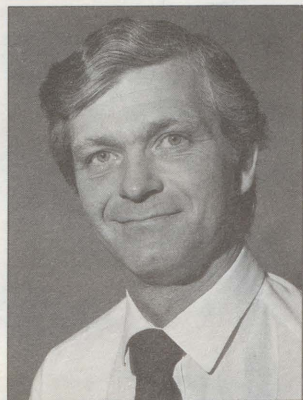
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The Lure and Lore of Trace Elements



by Professor W.D. Marshall
Department of Food Science and Agricultural Chemistry

Our research group has become increasingly preoccupied with the environmental fate and toxicology of certain organometallic compounds of

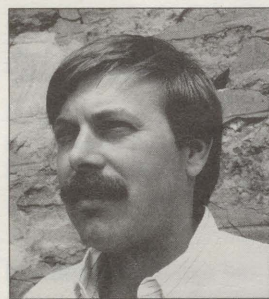
lead (Pb), arsenic (As), selenium (Se) and tin (Sn). Compounds is probably the correct word here - although we talk about the environmental fate of Pb or Sn, we don't seem to make the same simplification when we discuss the environmental fate of carbon. The way "carbon" interacts with an organism or a biological process (its bioavailability) depends on what chemical form the carbon takes (as a part of an essential amino acid or as a part of the molecular framework of a toxic pesticide residue). Similarly, the way

lead or tin interacts with biological systems depends on the chemical form of the Pb or Sn.

Organotin compounds have found increasing use as components of antifouling paints in marine applications whereas alkyllead compounds were added to gasolines to improve their octane ratings. Certain organotin compounds are essentially innocuous to living systems whereas other tin compounds (which are chemically rather similar) are acutely toxic to bivalves at extremely low levels. To provide an analogy for the levels we are talking about is not as easy as it might first appear. One could say that the levels correspond to only a few seconds of one's lifetime (which I seem to waste all too often). Equally well, one could compare the levels to the fraction of a gram of grey matter that a pilot uses to land a 300 ton jumbo jet. As a passenger on the jet, I prefer the former analogy. Although both analogies may be valid in terms of magnitude, there are subtle implications hidden in both.

For trace elements, the link between toxicity and nutritional essentiality is a question of degree. Many elements, including Pb, As, Se, and probably Sn, are generally considered to be nutritionally essential ultra-trace elements. Yet the effects of these elements may become toxic at only moderately higher levels of ingestion. For certain elements, overt signs of deficiency may become overt signs of toxicity over a scant tenfold increase in consumption. Our food supply remains the sole source of these trace elements. On the broader scale, our environment includes our resources to grow/produce the food we consume. Deleterious changes may impair our ability to produce food which is wholesome by either reducing the productivity of the soil or aquatic environments or by causing toxic products to contaminate the produce. It is important to understand the natural biogeochemical cycles of trace elements and to monitor the influences of anthropogenic activities on these cycles and on our food supplies. ■

Conservation Practices on the College Farm



by Wendell Joyce
Farm Director

The former Farm Director, Rudi Dallenbach, was a firm believer in farmers being custodians of the land, and he put into practice as many of his be-

liefs as possible. He was concerned about tillage practices in relation to soil conservation, and he matched crops to appropriate fields with regard to soil type and topography. He initiated the process of aerobic fermentation for liquid dairy manure to reduce odours and stabilize nutrients.

Traditionally the college farm has been a moderate user of chemical fertilizers and herbicides; however, as it is a teaching and research facility, experimental work often renders a strict crop rotation difficult.

Macdonald staff who use the farm and I see current and future objectives as: 1. to treat the farm's resources in such a way as to preserve and enhance their long-term productive potential, and 2. to demonstrate sound environmental farming practices to students and the visiting public.

Our present program at the farm includes:

- continued aeration of liquid dairy waste with moderate and timely applications;
- windrow composting of solid manure to: enhance its value as a soil amendment, to reduce odours and permit its application near residential areas, and to reduce volumes to be transported;
- further reduction in chemical fertilizer and herbicide usage;
- thermophilic digestion of hog manure to reduce odours, kill pathogenic

organisms, and potentially permit refeeding of waste to ruminant animals.

Some short-term future plans include:

- shortening and diversifying crop rotation to protect the soil and facilitate weed control;
- side by side demonstration of weed control systems for corn - combination rotary hoeing and cultivation versus post emergent herbicide applications;
- establishing a small scale rotational pasture demonstration with grazing sheep;
- planting about 3,000 metres of windbreaks for crop and soil protection;
- demonstration of minimum tillage systems to establish cereals and forages;
- refinements to the solid manure composting process. ■

"Our Link To The Community"

The Macdonald Journal Endowment Fund



Macdonald College and *The Macdonald Journal* are pleased to announce the receipt of a generous gift of \$10,000, from a graduate, to establish *The Macdonald Journal* Endowment Fund.

Graduates and friends of McGill University and Macdonald College are asked to consider supporting the Journal with a gift to this endowment fund. For gifts of \$3,000 or more, Macdonald College offers donors the opportunity to name a portion of the fund. For example, a named Macdonald Journal Travel Fund, or Photography Fund, could represent a donor's specific interests.

McGill has an excellent record of endowment fund management. The investment policy of the University ensures that the income produced by an endowment rises sufficiently each year to offset the effects of inflation, as well as providing a sound annual income.

Under Canadian and U.S. tax laws, gifts to a registered non-profit institution such as Macdonald College of McGill University are tax deductible.

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will provide income annually to cover the necessary travel expenses for the editor and/or guest writers to cover stories or conduct interviews outside the Montreal region.

a gift of
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will provide income each year to fund the front and back covers of an issue of the Journal, in full colour, as well as a full colour advertisement for student recruitment or some other deserving campus project.

For information write to:

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Ethanol for Transportation Fuels: A New Agricultural Opportunity



by Professor Paul J. Thomassin
Department of Agricultural Economics

Following the lead of the United States, Japan, and other industrialized countries, Environment Canada announced that

lead should be eliminated in transportation fuels in Canada by December 1990. Lead is being eliminated because of its adverse environmental and health effects.

Lead in transportation fuels is used as an octane enhancer and anti-knock agent. The elimination of lead for this purpose has created the demand for other additives which can be used as a substitute and provide the needed octane for transportation fuels. One of the potential alternatives is ethanol (10 per cent added to gasoline) or a product which contains a significant ethanol component

such as a methanol(5 per cent)-ethanol(3 per cent) blend, or ethyl tertiary butyl ether (40 per cent ethanol). If the ethanol alternative is selected, it could impact the agriculture sector by creating a market demand for an agricultural feedstock on which an ethanol industry could be based. Most past research has focussed on grains, in particular corn and wheat, as the agricultural feedstock and these results have questioned the economic viability of such an industry unless the industry is subsidized. Research conducted in the Department of Agricultural Economics has focussed on a potential alternative agricultural feedstock, Jerusalem Artichoke, because of its high ethanol yielding capacity.

Jerusalem Artichoke is a tuberous crop which has abundant top growth. Both the tops and tubers could be used as a feedstock for an ethanol industry. Our research has concluded that an ethanol industry based on Jerusalem Artichoke tops as its feedstock

would be economically viable in Quebec and western Canada. The estimated cost of ethanol using this feedstock is \$0.20/L in western Canada and \$0.36/L in Quebec. This cost of ethanol is lower than if produced from traditional agricultural feedstocks, corn or wheat, and is cost competitive for its fuel value as an octane enhancer in transportation fuels. The macro-economic impact in Quebec of a plant producing 100 million litres of ethanol would be an increase in: industrial output by \$146.2 million, gross domestic product (GDP) at factor cost by \$58.9 million, and employment by 1,324 jobs. In western Canada a similar plant would increase: industrial output by \$107.7 million, GDP at factor cost by \$43.2 million, and employment by 944 jobs. The development of this market would provide additional non market benefits such as a cleaner burning fuel than other alternatives, a market for agricultural products which is value added, and increased farm income. ■

A Man with a Mission

by Hazel M. Clarke

News of the sanctioning of the new name for the faculty - the Faculty of Agricultural and Environmental Sciences - was enthusiastically greeted by most of the staff here at Macdonald. Indeed, many have been working toward this goal for years, and a selection of these members of faculty have contributed to this issue.

The addition of Environmental Sciences to the well known Faculty of Agriculture reflects today's concerns on environmental issues by governments, by world renowned scientists, by a growing number of citizens' groups, farmers and, most important of all, by concerned individuals. Many are on the bandwagon now but it has taken time, patience, and persistence on the part of a few to reach this stage of global concern. One of the few who has spent a lifetime practicing what he preaches and certainly doing a lot of "preaching" is Dr. Stuart Hill, a professor in the Department of Entomology and Director of Ecological Agriculture Projects here at Macdonald College. It would be impossible, without writing a biography, to discuss Dr. Hill's career and philosophy, his travels to the next community or around the world, his countless conferences, workshops, seminars, and public speeches, his achievements and his regrets. It would be unthinkable, however, not to at least briefly discuss with him his thoughts as we approach what he might call a more "enlightened" age.

Adding Environmental Sciences to the faculty's name is not a new idea. Back in 1972 Bob Furneaux and Stuart Hill, on behalf of the college, visited the agricultural facilities at Pennsylvania State, Purdue, Cornell, Wisconsin, Michigan, and elsewhere. "The one thing that stood out," Professor Hill said, "was the degree to which they were getting involved in environmental issues. Some were considering changing their names to agricultural and environmental sciences or studies back then. We came back and made a similar recommendation to change our name, but it didn't materialize - not until now, 18 years later. Back in 1972 the situation wasn't as critical here as it was in the United States; it simply was not seen as a major priority. It

seems to me to be typically Canadian to wait until things happen everywhere else before getting on the bandwagon. If we had acted before, we might be in better shape than we are."

What spearheaded Stuart Hill's long and often solitary struggle on behalf of a cleaner, safer, and healthier environment? "I would say that while growing up in England I found that the focal point of my life was the local stream, the ponds, the forest - observing all of these organisms and their habitats and seeing how they worked fascinated me. I think I knew every nook and cranny, every plant and animal. I also had a wonderful grandfather who, though uneducated, was a fantastically intuitive gardener. He had an incredible ability to work with nature in a production agriculture type of relationship."

Stuart Hill took Marine Biology and had visions of farming the sea but, he said, "before I could 'save the world' that way, I felt I had to learn why we had made so many

mistakes on the land. I decided to study terrestrial systems, all of which gave me a feeling of how natural systems work and how we need to relate to them.

"When I first came to Canada in 1969, I was horrified at what I felt was a lack of awareness by most agriculturists of how natural systems function. Agriculture was being treated more as a factory than as farming. A few years later, I started teaching an evening course on pollution with Professor Ben Warkentin, and it eventually became a day course. We also started Environmental Biology and the Department of Renewable Resources was established. Gradually our environmental concerns materialized into real courses and programs."

Agriculture Through a Narrow Window

"With the courses we now offer and the knowledge we now have," Professor Hill continued, "we can find out how we can have a sustainable system of agriculture based on



A hard-working but happy group of full time and part time staff of Ecological Agriculture Projects, l to r, Lynn Lalonde, Geri Dionne, Jeff Martin, Alison Bentley, Diane Martin, Jean Duval, Stuart Hill, Director, and Suzanne Cazalais.

all the scientific information at our fingertips, not just a narrow, select area that talks about putting nitrogen on the soil, pesticides on a pest, antibiotics on a disease. Agriculture was being conducted through a narrow window. It is obvious that with the present state of degradation related to agriculture, we can't go on in the same way. What is happening is the birth of a new approach to agriculture which is still in its infancy."

Professor Hill says that sustainable agriculture is definitely not a return to "the old ways" and that it certainly can be profitable. "It's a new approach. We have new scientific knowledge. What I have been working for, promoting, and conducting research on is a more scientific agriculture based on all aspects of science and human behaviour. Present agricultural systems that are harmful to the environment are openly subsidized fairly heavily and, at the same time, they are subsidized in a hidden way by not taking into account the environmental costs in the cost-benefit analysis. If we are going to make agriculture profitable, the hidden costs must be taken into account. Undoubtedly we are going to have to pay more for food or regard food as a right rather than a commodity. We are going to have to stop producing some foods for which we have zero requirements and focus on foods that can nourish us."

What's a zero food? "Most of the foods in the centre aisles of supermarkets. The products there take resources to produce, lead to waste, and to malnourishment. The food that usually nourishes is around the perimeter."

Ecological Agriculture Projects

With the help of private donations, occasional grants, and volunteers, Ecological Agriculture Projects was set up in 1974 originally in a small room on the top floor of the Main Building before being moved out to make room for John Abbott College. It is now in the Barton Building. It is a non profit, independent resource centre that provides information and advice to the general public, students, governments, other organizations and industry in Canada and throughout the world. Information on sustainable agriculture, biological systems, ecological projects, environmental concerns, organic gardening and farming: from safely getting rid of earwigs to operating a commercial greenhouse or 2,000-acre farm according to ecological principles - all are available in EAP to those who show interest.

"EAP has been a major factor in bringing change within the faculty, in the province, and beyond," Professor Hill said. "Some of its influence has been as subtle as a student finding reference material for a paper and the professor who reads the paper being exposed to material he might not otherwise have chosen to read."

"The resource centre is, I believe, one of the best in North America if not the world," Stuart Hill said and told the story of his colleague and staunch EAP supporter Rod MacRae's telephone conversation with his dad, Dr. Herb MacRae, former Principal of the Nova Scotia Agricultural

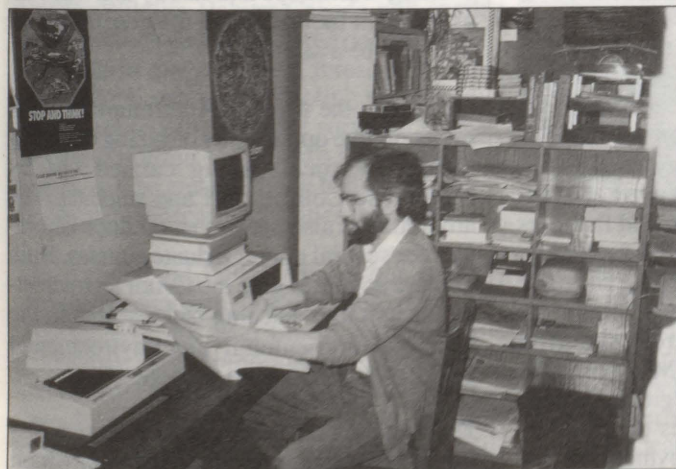
College. At a meeting in Washington Dr. MacRae sat next to the director of one of the leading resource centres for sustainable agriculture in the U.S. Dr. MacRae asked this man, whose centre has received a great deal of funding, where he gets his information. The man replied, "This is one area we are really not as good in as we would like, but the place that has it all put together and is the best in the world is Macdonald College. It has Ecological Agriculture Projects and that's the place for information."



Stuart Hill told us that the Ministère de l'Agriculture, des Pêcheries et de l'Alimentation (MAPAQ) has granted EAP funding for three years to get a new extension service "Service d'information AGRO-BIO" established. Set up in the spring of 1989 AGRO-BIO is a resource centre for MAPAQ's agronomes who require information on ecological agriculture. As well EAP is administering an Agriculture Canada "Development and Demonstration of Organic Horticulture (fruit and vegetable crops) project. This is a five-part research contract involving four different departments and the School of Dietetics and Human Nutrition: Agricultural Economics (Dr. John Henning), Plant Science (Drs. Debbie Buszard and Katrine Stewart), the School (Dr. Tim Johns), Animal Science (Henry Garino), and Entomology (Dr. Stuart Hill). This was negotiated with assistance from Dean Roger Buckland, Dr. Robin Stewart, Associate Dean, Research, and Flore Fournier of the Diploma in Agriculture Program.

No pun intended but at times Stuart Hill must have felt his struggles to be an "up hill" battle. "Not really," said Professor Hill. "It's like a spiritual belief. When you know something is right, you just carry on. If other people don't agree with you or argue against you, there is a bit of a tendency to see it as their problem because you are so committed to what you are doing."

Obviously, more and more people are now sharing in that commitment. ■



EAP's Rod MacRae: the PhD thesis he is currently working on will be the first in Canada on converting to Sustainable Agriculture.

Environmental Education Programs at the Morgan Arboretum

by Eric R. Thompson
Director, Morgan Arboretum

Environmental education programs have been offered at the Morgan Arboretum for over 20 years. While many of the programs are offered primarily to local school children, our clientele also includes members of scouting and guiding movements, local day care centres, children in summer programs from surrounding municipalities, senior citizens' groups, recreation groups for the visually impaired, and members of the Morgan Arboretum Association, as well as many other Montreal volunteer service organizations.

Located in the northwest corner of Macdonald College, the 245 hectare Morgan Arboretum provides a truly unique environmental education resource. Over 65 per cent of the area is covered with stands of native

trees that are representative of the rich forest ecosystems found in the Montreal region. There are over 40 hectares of softwood and hardwood plantations, as well as collections of trees and shrubs from across Canada and around the world. The diverse types of vegetation provide the habitat



Senior citizens' groups enjoy the leisurely pace of learning in the arboretum.



The Morgan Arboretum is an outdoor classroom for hundreds of children each year.

for an equally diverse wildlife population. Forest management in the arboretum includes the operation of a sugar bush producing 300 gallons (1,200 litres) of syrup annually and a variety of silvicultural treatments in both the plantations and natural stands.

Over the years there have been maple sugar tours, spring flower and forest ecology tours, visits by summer day camps, and fall tours. Financial support for developing and offering these tours has been received from "Le Ministère de l'Énergie et des ressources du Québec," Employment and Immigration Canada, and our Morgan Arboretum volunteers

who have put in countless hours and donated thousands of dollars through their involvement as nature guides.

We are currently developing a 10-month environmental education program. The activities being developed include: guided hikes with a variety of themes including over-wintering birds, maple syrup production, and "The forest: a source of life;" classroom presentations and workshops and week-long summer day camps. A series of weekend and evening workshops and family activities for association members and the general public will also be available.

Visitors to the Morgan Arboretum have the rather unique opportunity of seeing on-going research projects being carried out by Macdonald College staff and students. The arboretum is also used as an outdoor laboratory for several undergraduate courses. Both of these activities give the visitor an interesting insight into teaching and research in the Faculty of Agricultural and Environmental Sciences at Macdonald College.

The Morgan Arboretum has a long rich history of environmental education and we look forward to the challenge of meeting the growing need of environmental education opportunities in the future. ■

Wildlife Habitat Canada

Wildlife Habitat Canada, who kindly let us reproduce the painting on our cover, is a federal government organization with most of its funding coming from private sources, and the sale of Duck Stamps and paintings. To give you some idea of their goals and accomplishments, we are reprinting the following from the March 1990 "Habitat Quarterly."

Even though Canada has already suffered from severe habitat destruction, with its rich and diverse landscape, there is still a strong foundation upon which to build.

Wildlife Habitat Canada believes that this rich, diverse and sustainable landscape can best be maintained by co-operative efforts with the private (individual and corporate) stewards of land and through co-operative programs with government agencies. The foundation has identified four key landscapes where it is focusing its landscape program.

The Forest Landscape: Much of Canada's landscape is forested. Because of wide variations in physiography, soil and climate, these forested areas are rich in wildlife and other renewable and non-renewable resources. The forestry industry provides more jobs in Canada than any other sector and contributes \$13 billion per year to the Canadian economy. Yet current forestry practices in Canada are largely unsustainable, leaving little hope for jobs or wildlife in our future. In the coming decade, Wildlife Habitat Canada will spark and encourage government and private sector partnerships that transform forestry in Canada onto the sustainable footing that the industry and wildlife need for survival. In this process, a portrait of Canada's forested landscapes will be created, tying habitat requirements and landscape aesthetics together.

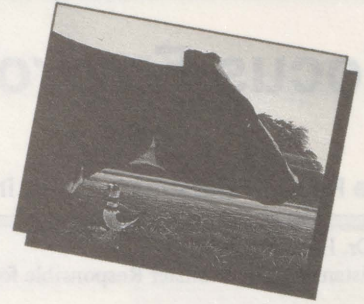
The Agricultural Landscape: In our prairie provinces, southern Ontario, and parts of Quebec and the Maritimes, agricultural landscapes are predominant, diverse in nature, and critical to many wildlife species. Canada is recognized worldwide for its leadership in agriculture. Unfortunately, this success has often been at the expense of wildlife and its habitat, particularly wetlands and prairie grasslands. Poorly planned

farming techniques endanger more species of plants and animals in Canada than any other activity. Wildlife Habitat Canada is working toward developing programs that demonstrate that sustainable agricultural practices are compatible with the achievement of soil, water and wildlife habitat conservation on a healthy agricultural landscape.

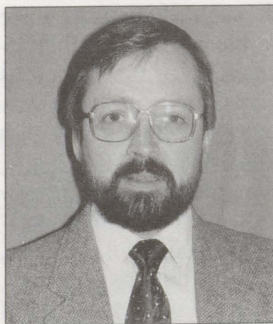
Wetlands and Critical Landscapes: Wetlands, as perhaps the most productive and biologically diverse ecosystems in Canada, are critical landscapes of special significance to Wildlife Habitat Canada. In our view, the traditional range of wetlands, including marshes, swamp forests, fens and bogs, may be broadened conceptually to cover other special landforms defined by flowing water, such as riversheds and estuaries. All such "watersheds" are excellent wildlife habitat, not only for waterfowl, but also for fish, small mammals ungulates and many plant species. As importantly, however, they also provide

us with essential ecological services, such as water filtration, flood control, drought relief and recreation.

The Northern Landscape: This much talked about but poorly understood area of Canada is not one continuous landscape, but several varied physiographic sub-regions. Spanning the Yukon, Northwest Territories and Northern Quebec, the topography includes not just Arctic tundra, but also forested mountains and valleys, high mountains of glacial ice, and lowland coastal mudflats. These landscapes issue a special challenge for conservationists, because of a predominance of government owned and controlled land, changing federal/territorial roles, and native land claims and self-government all on an environment sensitive to human impact. The foundation is beginning to work co-operatively with native people, governments and industry to promote sensible and sustainable development that respects northern wildlife. ■



Biological Weed Control



by Professor A.K. Watson
Department of Plant Science

The biological weed control research group at Macdonald College is actively searching for and developing naturally occurring plant pathogens for the control of noxious weeds. Bioherbicide research is our primary thrust with a bioherbicide being defined as a preparation of living inoculum of a plant pathogen which is formulated and applied in a manner analogous to chemical herbicides to control weed species. Research clearly suggests that these biological approaches are more environmentally compatible than synthetic chemical, tillage, and other weed control strategies. Biological

and technological limitations to this approach are being studied and significant progress is being made.

Our research has focussed on agricultural weeds such as velvetleaf, field bindweed, wild buckwheat, lamb's quarters, yellow nutsedge, quack grass, etc., but more recently our research has also examined important weeds in our urban and forestry sectors. Pathogens of dandelion, plantain, and ragweed appear most promising as does a pathogen of fireweed, one plant which competes with young conifer seedlings in reforestation projects. McGill University has received three patents related to this work and five or more are pending. We are well on our way to eventually providing alternatives to chemical herbicides for some of our troublesome weeds. ■

Focus Environment

The Place of the Environment in a University Curriculum

by Dr. Harvey L. Mead

Assistant Deputy Minister Responsible for Sustainable Development and Conservation, Ministère de l'Environnement

As the environment becomes more than a topic of table talk and begins to penetrate board rooms and university program committees, it becomes critically important to define its place in contemporary society.

Fundamentally, our present understanding of the term "environment" is extremely broad, and rightly so. Clearly, the environment includes our bio-physical surroundings, whose state of degradation is the subject of almost daily analysis by governments as well as by the media. Somewhat less obvious is the growing consensus that the environment also includes our human-fashioned surroundings.

In fact, the overwhelming presence of humans everywhere on the planet has forced us to take account of our interactions with the bio-physical environment in attempting to deal with the mistakes of the past and the efforts to plan a better future. We are not a simple externality on the planet; our very survival is intricately bound up with its continued functioning.

Seen in this light, the environment is not just another subject. The word refers to the framework of our fundamental human activities, physical, economic, social and - what we have yet to deal with - moral.

A university program such as that of Macdonald College, with a widely recognized expertise in resource use and agriculture, can be at the heart of the current move toward integrating the bio-physical and human elements in an effort to ensure sustainable development for the future. This has certain consequences.

Future practitioners in health, agriculture, renewable resources - in all the areas of special expertise associated with Macdonald College - will be working in the environmental field, whether they describe it in those terms or not. Their fundamental action is inextricably bound up with the bio-physical, but is a constituent as well of the human environment. The bio-socio-feedback loops involved in their daily lives as professionals in these fields thus need to become intuitively



On a recent visit to Macdonald, Dr. Harvey Mead, I, met with Dr. Rodger Titman, Associate Dean, Academic, and Gregory Weil, Development Officer.

obvious to them, before and as they engage in their careers.

In light of the above remarks, Macdonald College's recognition of the importance of the environment in its new name - should not involve the addition of a new program. It is essential that the recognition leads to the explicit integration of environmental concerns throughout existing programs.

Future graduates of Macdonald should all have been trained in such a way as to make their careers compatible with sustainable development, the integration of the numerous components of human activity in such a way as to ensure its permanent compatibility with environmental potentials and constraints. Future agrologists should not have simply taken a few courses on "the environment." Soil compaction and erosion, soil fertility, product quality, inputs and outputs generally, and climate as well as air and water - all of these will be the stuff of their daily lives.

The Brundtland Commission has brought to the public's attention a crisis resulting from our past mismanagement but at the same time a wealth of information long available but left in the closet. In the context of its findings, it is imperative that future graduates realize that their every gesture as professionals will have consequences for the "environment." They must see that the environment is what integrates their lives as professionals.

It is worth noting that present concerns for the environment should lead to an even broader integration of the Macdonald College programs. The Brundtland Commission probably makes its most important contributions in dealing with questions of equity. Some 20 nations were represented on the Commission, many of them "third world" countries. If the environmental problems of the developed world are to be successfully addressed, it will not be due to our success in dealing with them on a local basis. Rather, we will overcome the present crisis when we realize that local actions will be influenced directly by the actions of the entire human population in its struggle to attain something resembling dignity, a state simply unknown to some three to four billion people at present.

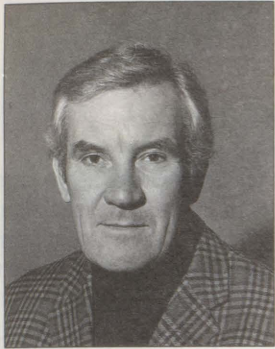
Our squandering of the world's wealth and the third world's population's destruction of their long-term life support systems in their effort to survive on a daily basis are inseparable. Together, we are changing the world's climate, radically altering its potential productivity, and endangering its ability to sustain us over the long term.

Only together can we overcome these obstacles. Technology will not provide the key to this. Only recourse to an ethical commitment hardly common in our contemporary practice can lead us to the solution. It is in this sense that the notion of "environment" has, in addition to its bio-physical sense, and beyond its social and economic components, a political and moral imperative that we will ignore at our peril and that we should make every effort to include even in our somewhat narrow professional programs.

The recent changes in Eastern Europe give some sense of how fast change can occur when societies as a whole decide to come to terms with their destiny. These changes also foreshadow difficult times ahead for these societies, which in all likelihood do not possess the infrastructure and skills necessary to make the transition without trauma. If we do not act rapidly and on a broad front, the next arena of such drastic change may well be "the environment." ■

Seeking Solutions

Grass Roots Knowledge Important



by Dr. R.K. Stewart,
Associate Dean, Research

You will gather from the theme of the current Journal that the faculty is pretty excited about our new name. Certainly we are not doing anything drastically different from what we did before, but the inclusion of "Environmental" Sciences in the title, better reflects our activities in the past, present, and, we hope, the future. This faculty has long recognized the need to integrate the concepts of environmental protection into our teaching and research efforts. We also have a current and long-term commitment to work in developing countries. Recently we had a visitor to Macdonald who brought a most interesting perspective to the question of how to promote development that is environmentally sound. I am talking, of course, about Sustainable Development.

Dr. Shimwaayi Muntemba is the Executive Director of the Environmental Liaison Centre International (ELCI) based in Nairobi, Kenya. The mandate of the centre is to work on a global basis to promote the work of a very large group of member non government organizations involved in development, while emphasizing the need to recognize environmental implications.

Dr. Muntemba came to us as an Agricultural Economist with impeccable qualifications, having worked with the famous Brundtland Commission which studied global environmental issues. The thoughts that Dr. Muntemba shared with us were presented in a quiet, efficient manner, but they were powerful and calculated to make us examine our own activities with perhaps a little less complacency.

A major argument presented by this persuasive speaker is that we need to take more notice of "the grassroots" knowledge available to us from local communities in Latin America, Asia, and Africa, as well as our own country.

Dr. Muntemba said that the great majority, if not all, development projects have had no lasting positive effect because of the tendency to impose technologies developed out of context for the country in question. Dr. Muntemba's argument is that we should involve the local community very early in the development effort. The aspirations and extant or traditional methods of the community should be considered carefully as they are potentially extremely valuable for sound development. The example given by Dr. Muntemba was the case of women in African agriculture. Apparently the agronomes never talk to women, yet more than 80 per cent of the agricultural practices are carried out by women.

Another thrust from Dr. Muntemba was against the claim from many of us in the North, that overpopulation is the key problem for the developing countries of the South. Not so says Dr. Muntemba! Many developing countries have an acute labour shortage in agriculture and what is needed is encouragement to the people to engage in an agriculture which provides them with "secure" livelihoods. Dr. Muntemba views human labour as one of the most valuable assets for many developing countries, and

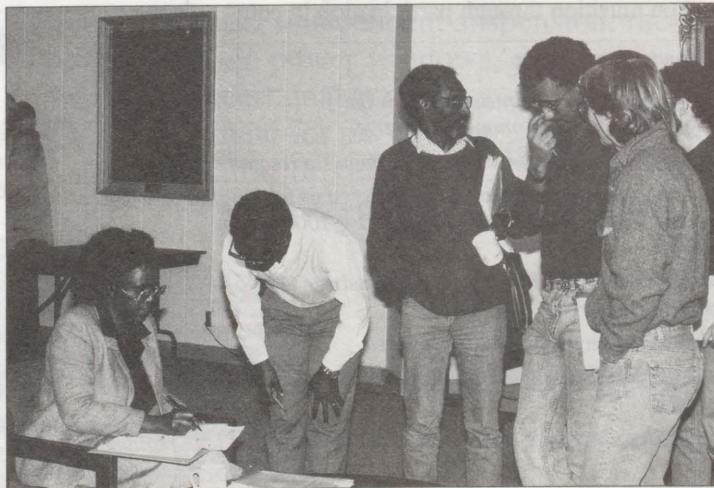
sometimes the only one.

As far as agriculture is concerned, Dr. Muntemba identifies the two major concerns as soil and water conservation, and this led her to a discussion of land tenure systems. Private ownership of land, according to Dr. Muntemba, is frequently detrimental to environmentally sound soil and water practices in developing countries. The best model is public ownership where the stewardship of the resources is the responsibility of the local community.

Although Dr. Muntemba covered a great deal of other ground during the discussions with the Macdonald people, a final point made a considerable impression on me. In responding to the question as to what we in the universities should be doing for Sustainable Development, the advice was that we should be providing well-researched information. This information should be usable by policy makers as well as being available and of value to the grassroots people in the communities. Frequently the information required will be "location specific" in that *in situ* knowledge must be gained. This is where early and complete participation of local people is essential, and we have to guard

against introduction of inappropriate technologies.

I must confess I found that some of Dr. Muntemba's statements made me feel a little uncomfortable, especially when the per capita energy consumption of we Canadians was compared unfavourably to that of developing countries. Still, I had a little private talk to myself and found some justification for our energy use in our Canadian winters. ■



Dr. Muntemba had several discussions with Macdonald students and staff and answered many questions during her visit to the campus.

Issues in Human Nutrition



by Linda Jacobs Starkey, University Coordinator
Professional Practice (Stage) in Dietetics, School of Dietetics and Human Nutrition

A HEALTHY NUTRITIONAL ENVIRONMENT: CHOICE OR CHANCE?

After about the age of two, food selection and refusal is a personal choice for most Canadians. What we have to choose from may be controlled by another person, financial resources, or food preparation skills, yet, all in all, we eat and maintain relative health. Is this a coincidence or a planned choice of health achievement from healthy habits? Did you know that there is a health promotion strategy at the national level that influences your food choices? Canada has made a commitment to healthy environments, and the nutrition environment is no exception.

Our social security system has long included a health care mandate to treat disease and illness, equally, for all citizens. Since 1974, long-range health promotion and disease prevention planning were actively included in our overall health system¹. Unlike the global treatment of illness, these latter programs have been targeted to specific populations: the elderly, single parents, native populations, and others. More recently, Health and Welfare Canada released a framework for planning future health of Canadians, from which all Canadians are expected to benefit² (Figure 1). The graphic representation shows that our greatest health challenges are to reduce inequities, to increase prevention, and to enhance people's ability to cope. These challenges can be met through planned health promotion programs (mechanisms) which use the expertise of the public, community services, and policy planners. Where does nutrition fit into this framework?

Let's look at the Health Challenges part of the framework, as an example because we know there are health challenges related to food and nutrition. Read across the diagram and substitute these phrases: unequal food supply distribution; unhealthy food choices which lead to dental caries and overweight, for example; and inability of the consumer to interpret food and nutrition marketing messages/labels. "Healthy environments" could refer to the availability of quality foods in senior citizens' homes; "self-care" could mean development of personal knowledge based on nutrition through participation in com-

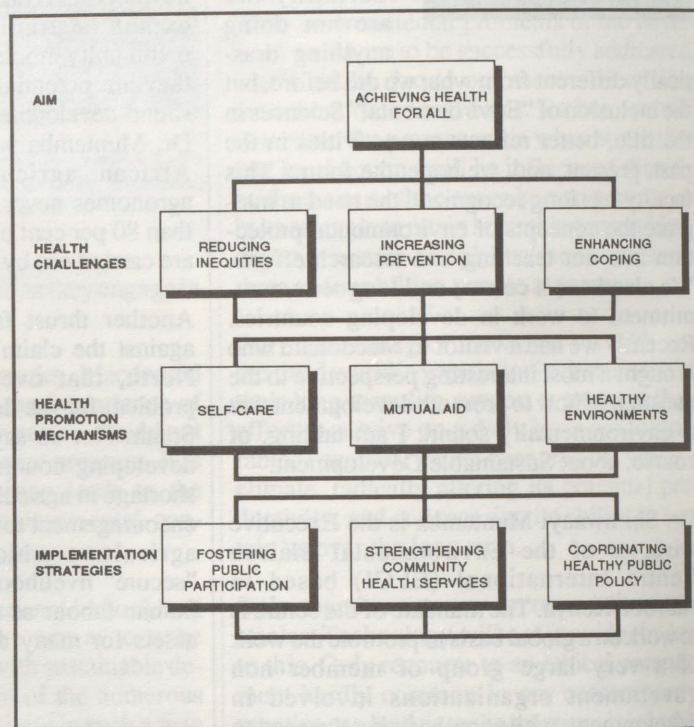


Figure 1: Achieving Health for All: A Framework for Health Promotion.

Nutrition Recommendations for Canadians

- The Canadian diet should provide energy consistent with the maintenance of body weight within the recommended range.
- The Canadian diet should include essential nutrients in amounts recommended.
- The Canadian diet should include no more than 30% of energy as fat (33g/1000 kcal or 39g/5000 kJ), and no more than 10% as saturated fat (11 g/1000 kcal or 13 g/5000 kJ).
- The Canadian diet should provide 55% of energy as carbohydrate (138 g/1000 kcal or 165 g/5000 kJ) from a variety of sources.
- The sodium content of the Canadian diet should be reduced.
- The Canadian diet should include no more than 5% of total energy as alcohol, or two drinks daily, whichever is less.
- The Canadian diet should contain no more caffeine than the equivalent of four regular cups of coffee per day.
- Community water supplies containing less than 1 mg/litre should be fluoridated to that level.

Figure 2.

munity nutrition education programs³. Nutrition efforts can enhance every aim of the "Achieving Health for All" framework.

The Canadian government is actively involved in this framework already. A concrete example is the "Nutrition Recommendations for Canadians."⁴ After consultations and research, a Scientific Review Committee of Health and Welfare Canada has published the rationale for new recommended nutrient intakes to maintain health and prevent chronic disease (Figure 2). This will be used by nutrition program planners, researchers, and national food supply experts. A Communications/Implementation Committee has developed "Canada's Guidelines for Healthy Eating" which will be the basis for public education programs

(updating and replacing Canada's Food Guide). It includes the key messages for healthy Canadians over the age of two years⁵ (Figure 3). Look for publicity over the summer on the new nutrition promotions for healthy Canadians.

Susan Morgan, a former Clinical Coordinator for Professional Practice (Stage) in Dietetics and sessional lecturer in the School of Dietetics and Human Nutrition, is The Canadian Dietetic Association's Quebec anglophone spokesperson for media launching of the Nutrition Recommendations. In a recent discussion, she said that "in addition to providing the Canadian public with guidelines for healthy eating, these revised recommendations will also give us an agenda where communication and implementation can be done collectively with commitment and partnership of many agencies including government, agrifood industries, nutrition, and other health professionals, non government-

tal and community health organizations, and the public.⁶

Canada has made a commitment to promotion of healthy environments, including the nutrition environment. It is our responsibility to participate in programs to increase our skills as consumers in the food marketplace and as professionals to accept responsibility for development of foods and programs for healthy food choices. If everyone does it — we will realize the goal of "Achieving Health for All." ■

Canada's Guidelines for Healthy Eating

- Enjoy a *VARIETY* of foods.
- Emphasize *cereals, breads, other grain products, vegetables and fruits.*
- Choose *low-fat dairy products, lean meats and foods prepared with little or no fat.*
- Achieve and maintain a healthy body weight by enjoying regular physical activity and healthy eating.
- Limit salt, alcohol and caffeine.

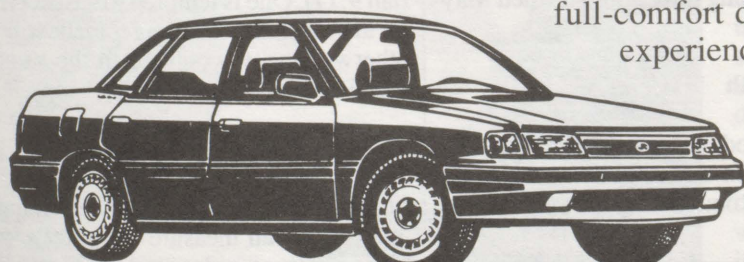
Figure 3.

Nutrition Recommendations. The Report of the Scientific Review Committee. Health and Welfare Canada, Ottawa.

- ¹ Health and Welfare Canada. 1974. A New Perspective on the Health of Canadians, a Working Document by Marc Lalonde. Supply and Services Canada, Ottawa.
- ² Health and Welfare Canada. 1986. Achieving Health for All: A Framework for Health Promotion. Health and Welfare Canada. Ottawa.
- ³ Nielson, H. 1989. Achieving Health For All: A framework for nutrition in health promotion. J. Can. Diet. Assoc. 50(2):77.
- ⁴ Minister of National Health and Welfare. 1990.

- ⁵ Minister of National Health and Welfare. 1990. Action Towards Healthy Eating Canada's Guidelines for Healthy Eating and Recommended Strategies for Implementation. The Report of the Communications/Implementation Committee. Health and Welfare Canada, Ottawa.
- ⁶ Personal communication, April, 1990.

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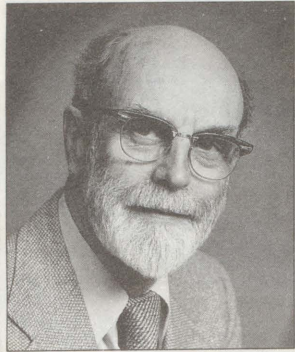
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Fun Fact Fable Fiction



by Dr. Ralph H. Estey
Emeritus Professor, Department of Plant Science

A Fishing Nun

The first book on fishing, for recreation, was written by a nun, Dame Juliana Berners, Prioress

of the Benedictine Nunnery of Topwell, near St. Albans, England, in 1491. Its title was "A Treatise on Fyshing wyth an Angle." It was originally hand written because its writing preceded the printing press. However, it was one of the first press-printed books by William Caxton.

Golden Age Humour

A Senior Citizen is one who was here before television, antibiotics and polio shots, frozen food, decaffeinated coffee, nylon, dacron, radar, jet aircraft, credit cards, ball-point pens, fluorescent lights, FM radios, tape recorders, electric typewriters, electronic music, or word processors. To us time sharing meant being together, not computers, and a chip meant a piece of wood. Hardware meant things made of metal, and software wasn't part of our vocabulary. Coke was a refreshing drink, grass was for mowing, and pot was a kitchen utensil. Coeds never wore slacks, nor had their hair cut short. They often wore Peter Pan collars and probably thought cleavage was part of the butcher's work. One could always identify them as women. Of course, that was before men wore earrings and long hair. We were before panty hose and drip-dry clothes, before ice makers and dishwashers, clothes dryers, electric freezers and electric blankets. We got married first and then lived together, without the benefit of vitamin pills or Valium. In spite of all the things we didn't have, life was rather pleasant in those days.

Student Answers

Vesuvius is a volcano on which you can climb to the top and watch the creator smoking.

Self Elimination

Agricultural colleges and agricultural experimental stations tend to contribute to a situation where fewer and fewer farmers produce more and more food and fibre products. To put it another way, agricultural education and research eventually eliminate a large part of the clientele they were established to serve. As a consequence of their successes, there are now fewer students going to agricultural colleges to study better farming methods. The majority go there to study plant protection, entomology, chemistry, economics, business management, wildlife management, environmental enhancement, etc., or as a step toward other goals that are also only peripherally related to farming.

Not Rationed

*A wartime lady of fashion
Much noted for wit and for passion
Is known to have said
As she jumped into bed,
"Here's one thing the government can't
ration."*

Female Bachelor

Mount Allison University, Sackville, N.B., was the first university in the British Commonwealth to grant a Bachelor's Degree to a woman. Grace Annie Lockhart of Saint John, N.B., was awarded the diploma, Mistress of Liberal Arts in 1874, and the degree of Bachelor of Science in 1875. After being married and raising three sons she died May 18, 1916.

Making an Oath

When a man of today swears before a court he holds his hand on a holy book before testifying. Ancient Romans held their testicles in testimony.

Misunderstood

Judge: Mr. Smith, you were brought in for drinking. What do you have to say about it?

Mr. Smith: I say that's a great idea. Let's get started.

Wolves in Nova Scotia

Nearly a century and a half ago, wolves had become so numerous in Nova Scotia that the government passed "An Act to encourage the killing of wolves." That Act, which provided for the payment of "...a bounty of 40 shillings for each full grown wolf, and 20 shillings for each wolf whelp," was given Royal assent March 28, 1845.

The Moon

We always see only one, and the same, side of the moon. The reason for this is thought to be due to its irregular shape. The "face" having the greater mass is pulled toward the earth, thus forcing it to be constantly in view.

Corn = Grain

The Bible refers to "corn" at least 18 times, even though the only cultivated grains in the general area of Palestine, at that time, were wheat, barley, and spelt, a type of wheat. They had no oats or corn, as we know them today.

The people who translated the Bible into English, between 1603 and 1611, used the word "corn" as we use the word "grain." This is seen very clearly in John 12:14. The comment about corn that intrigues me is the one about it making young men cheerful (Zachariah 9:17). One is tempted to suspect it refers to an alcoholic beverage made of grain; otherwise, why would it, in the same line, mention wine making maids happy.

Fact or Fable?

The Japanese are reported to be making flush toilets that can measure the sitter's weight, blood pressure, pulse, and temperature, plus the amount of urine and stool. The data can be conveniently displayed on a monitor that retains the information until one stands to look at it, and then turns it off. ■

Notable Events

QYF Celebrates Their 20th

Some 150 past and present members of the Quebec Young Farmers Provincial Federation and their friends gathered in the Centennial Centre at Macdonald College last October to celebrate QYF's 20th Anniversary Reunion Party.

We are pleased that they chose Macdonald College for their party; it was with the help of the Quebec Farmers' Association and the Extension Department of Macdonald College that QYF came into being. Over the years many members have been Mac students; many worked with QYF in the Extension Offices, and there are still very close ties between this young people's organization and the college.

Two former members have the following to say about QYF:

"QYF has been a very important part of my life. I joined as a member in 1970, became a fieldman in 1978, Secretary Manager in 1979 and, finally, provincial coordinator from 1981-83.

"During that time the aspect that impressed

me the most about QYF was its ability to make people from different areas of the province, separated by great distances, feel as if they lived in the same town. QYF greatly reduced the distance factor between the English-speaking areas of rural Quebec: common interests and goals were more important than distance.

"All clubs in their respective areas, be it Lachute, the Townships, the Valley, or Shawville, had fundraising activities, calf shows, community projects, etc. QYF made it possible for us to do these things together, on a provincial level. It is still the same.

"I see evidence of this now in my numerous outings at agricultural events. In many instances, the friendships become important contacts (colleagues in professional lives).

"Not only did QYF allow people from different areas of the province to get to know each other, but QYF also allowed us to appreciate the similarities and the differences between these regions. After all, we were all from the same province, but thanks to QYF and its provincial activities, the province became a

much smaller place. As a Townships' girl, I found the Chateauguay Valley very flat the first time I visited, and thought it was weird that to get to Shawville, I first had to go to Ontario! But after the second visit I could appreciate these differences.

"My first provincial activity was a weekend exchange in 1976 between the Townships and the Valley. Now I must add, exchanges are between countries,

not between regions of the same province! However, this was a first for both areas involved and was a BIG thing. For days we talked about driving all the way to Howick from our hometown of Richmond. It was a great success - but those Valley people danced three calls per square dance set - normal people danced two! Many provincial activities followed in the months and years, and going to another area was no big deal - always great fun, but no big travelling deal.

"An example: A few years later, at the annual July 1st Ice Cream Social, organized by the Richmond Young Farmers, a car load of Howick members showed up - for dessert! They had supper in Howick, came to Richmond for dessert to support us, and returned to Howick that night. After all, chores awaited! That night, I realized we were a far cry from that first exchange, when we went to a land unknown filled with strangers.

Basically, the sense of family is what I appreciated the most about QYF. It's just that the family was spread all over the province.

The links and exchanges with A.J.R.Q. members, as well as all the national and international opportunities to meet people added another great dimension to this argument. Basically, QYF overcame distances, however great, and overcame the barriers that often come with distance."

Ann Louise Carson, agronome
Attachée politique, MAPAQ

"By belonging to the Quebec Young Farmers Provincial Federation an exciting new world opens up - one of community involvement, travelling to activities, and meeting people with varied backgrounds. But most importantly, the QYF gives young Quebecers a positive influence to grow up with through fun, leadership, and team work."

Doug Griffith
QYF Secretary Manager, 1982-84
Amprior, Ont.



A happy group of QYF Secretary Managers, seated, l to r, Doug Griffith, 1982-84, Sandra Smith-Hall, 1984-86, Ann Louise Carson, 1979-80, Katherine Patterson, 1987-88, Lynn Anderson-Arthur, 1986-87, with present Secretary Manager Greg Barr.

Ayrshire Canada's New Offices

Some 200 people from Ontario and Quebec were on hand on November 5, 1989, to mark the occasion of the official opening of the Ayrshire Breeders Association of Canada's new headquarters in Glenaladale House at Macdonald College.

Michel Pagé, le Ministre de l'Agriculture, des Pêcheries et de l'Alimentation du Québec, welcomed all Ayrshire breeders to Quebec and wished them continued success. He commented on the continued improvement in the breed and pointed out how it was helping agriculture in Quebec and in the rest of Canada. Mr. Pagé cut the ribbon officially opening the new headquarters.



Taking part in the ribbon-cutting ceremonies were, l to r, Merwie Garzon, secretary, Ayrshire Canada, Marcel Couture, Associate Dean, Community Relations, Robert Powell, President of Ayrshire Canada, Michel Pagé, Ministre de l'Agriculture, des Pêcheries et de l'Alimentation, Louis-Marie Lapointe, Past President, Alain Trudeau, General Manager of Ayrshire Canada, Alan Spence, and Lynn Kondo, translator, Ayrshire Canada.



Fred Burns, Dip'49, and Doug Page, Dip'56, chat with Ayrshire Breeders' President Robert Powell and his young son Glen.

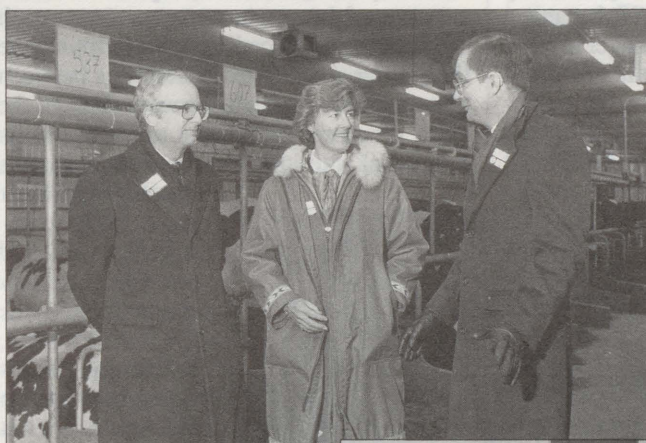
Feed Mixing Centre Ceremony

A plaque dedication ceremony to acknowledge the \$50,000 gift from Canada Packers Inc. to the feed mixing centre of the cattle and research facility was held on December 5, 1989. The ceremony was one of the first official functions to take place in the recently named R. Howard Webster Centre - the cattle facility and feed mixing centre opened in 1987 and strongly supported by R. Howard Webster, O.C. B.A.

Dr. Roger Buckland, Dean and Vice-Principal, welcomed members of the Webster family, Gaëtan Lafrenière, Regional Manager, Shur-Gain, Division of Canada Packers Inc., and other staff from Canada Packers, special guests, and staff from the McGill and Macdonald campuses.

Mr. Gaëtan Lafrenière spoke on behalf of Canada Packers.

Comments from Dr. Bruce Downey, Chairman of the Department of Animal Science, the plaque dedication, tours of the facilities, and a luncheon in the farm centre completed a pleasant ceremony on an exceptionally cold winter's day.



Standing in front of the Canada Packers plaque in the feed mixing centre are, l to r, Marc Préfontaine, BSc(Agr)'78, Sales Supervisor, Ontario, for Shur-Gain, Réjean Faubert, BSc(Agr)'82, Director of Purchasing, Québec, Dr. Bruce Downey, Chairman of the Department of Animal Science, Murray G. Ovens, Vice-President and General Manager, Shur-Gain, Dr. Roger Buckland, Dean and Vice Principal, Robert Robson, BSc(Agr)'65, Manager, Shur-Gain Research Farm, Maple, Ont., and Gaëtan Lafrenière, Regional Manager, Shur-Gain Division, Canada Packers.



John McFaddyen and his wife Nancy, niece of R. Howard Webster, enjoy a tour of the cattle facilities with Dr. Roger Buckland.

Reunion

Getting Together in Montreal

IUFRO World Congress to be Held in Montreal

The 19th World Congress of the International Union of Forestry Research Organizations (IUFRO) will be held in Montreal from August 5 to 11, 1990. This Congress takes place every six years; this is the second time that it is being held in North America and the first time in Canada. The theme of the Congress will be "Science in Forestry: IUFRO's Second Century," and there will be two sub themes concerning tropical forestry and air pollution. Included in the agenda will be tours of various sites, among them the Morgan Arboretum. Eric Thompson, Director of the Arboretum will act as host for the visitors in the arboretum and is, at present, busy planning the tour. The International Union of Forestry Research Organizations will celebrate its centenary in 1992. It is second only to the International Red Cross in longevity. The Union links 15,000 scientists from almost 700 research institutions and agencies in 102 countries.



Jean Siegenthaler, centre, with, l to r, Michel Barré, Director, DHAS Inc. Wendell Joyce, Farm Director, Robert Moore, Assistant Director, DHAS Inc., and Professor Elliot Block, Department of Animal Science



The Siegenthalers left Switzerland for Canada in 1981 and in just a short number of years have built up an excellent Holstein

herd on their Victoriaville farm. In 1988 they had the highest BCA's for production in all of Canada.



After his seminar students and staff continued to ask Jean Siegenthaler questions about his highly productive farm.

Federal - Provincial News Conference



Secretary of State Gerry Weiner and Quebec Education Minister Claude Ryan answer questions from the press. Photo by Helen Cohen Rimmer.

Macdonald College was the site chosen for a news conference on February 2, 1990, where Federal Secretary of State Gerry Weiner and Quebec's Education Minister Claude Ryan unveiled a new federal-provincial agreement whereby Quebec will receive \$328 million in federal funds to boost minority language education in Quebec.



Several Macdonald staff members were present to welcome the federal and provincial officials to Macdonald College: l to r, Dr. Roger Pritchard, Director of the Institute of Parasitology, Dr. Rodger Titman, Associate Dean, Academic and Student Affairs, the Honourable Gerry Weiner, Secretary of State, Claude Ryan, Education Minister, Marcel Couture, Associate Dean, Community Relations, Daniel Johnson, MNA for Dorion and President of the Treasury Council, and Russell Williams, MNA for Nelligan.

Ceres Award Winner on Campus

Mr. Jean Siegenthaler, the recent winner of the Ceres Award, visited Macdonald College on March 30, 1990, gave a seminar, met with students and staff, and toured various facilities. The Salon of Agriculture created the Ceres Award which is sponsored by several business organizations. Jean Siegenthaler and his wife Anne-Lise, who was unable to come to Macdonald, were this year's winners. Marcel Couture, Associate Dean, Community Relations, headed this year's selection committee.

23rd International Dairy Congress

More than 5,000 participants from over 50 countries will meet in Montreal, October 7 to 12, 1990, for the 23rd International Dairy Congress and Exposition 1990. Over 200 speakers will address subjects covering all aspects of the dairy industry from biotechnology to food safety, quality assurance, and marketing.



"Dairying in a Changing World," is the theme for the Congress, the first to be held in North America. There will be a special international display of products for delegates to see and discuss new products, packaging, and ideas. Technical tours of the Canadian dairy industry will be available.

The Committee Chairman for the Scientific and Technical Program for the Congress is Professor Elliot Block, of the Department of Animal Science here at Macdonald College.



Pause for a photo before visiting the Biopesticide Research laboratory: l to r, Dean Roger Buckland, Mr. Robert Middlemiss, Ministère délégué, MAPAQ, Professor Alan Watson, and Anne Bedard, attachée politique.

Robert Middlemiss Visits Macdonald

Early in the new year - January 12, 1990 - Mr. Robert Middlemiss, Ministre délégué (delegate Minister) for the Ministère de l'Agriculture, des Pêcheries, et de l'Alimentation, visited Macdonald College and spent a busy day meeting staff and visiting teaching and research facilities.

"Farmoo"ceuticals

Dr. Jeffrey Turner's laboratory in our Department of Animal Science has recently

completed phase 1 of a long-term program to harness the impressive synthetic capacity of the bovine mammary gland. Technical advances now permit cow udder cells to be routinely grown and "milked" during long term tissue culture completely outside the cow. In collaboration with the American Red Cross, Dr. Turner is using a biotechnology approach to have these cow cells produce pharmaceuticals, useful in the treatment of human diseases. We hope that the introduction of human genes will give the appropriate molecular directions to the cow cells which will then in turn produce authentic human proteins. Such proteins hold great therapeutic promise for the treatment of bleeding and clotting disorders.

These important developments are currently under consideration for world-wide patent coverage. You will read more about this fascinating research in up-coming issues of the Journal.

Friends of the Journal

It is with particular pleasure that we take this opportunity to acknowledge those individuals, companies, or organizations who have made a recent financial contribution to *The Macdonald Journal*. Their thoughtfulness and support is much appreciated.

Dr. Phoebus A. Anastassiadis

Trina Vineberg Berenson

Harold D. Blenkhorn

Dr. H. Garth Coffin

Mrs. H. Garth Coffin

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Reunion

Getting Together in Halifax

by Bill Ritchie, BSc(Agr)'51

It began at the 35th Class Reunion held at Mac in the Fall of '86 where we decided that a trip to Halifax might be in order for August 1989. The planning, the city, the weather, all cooperated to give 70 of us a wonderful four days together. Some had been touring a bit before hand; the Bells and the Flanagans independently had 'done' the Cabot Trail in Cape Breton. Most of the Class were in residence at St. Mary's University. People drifted over to Mary and Ewart Blanchard's, and the fun began!

Classmates kissed and embraced freely (just like the good old days), everyone mingled furiously that night while the band played on and the barbecue added to the sights, sounds, and smells of the beautiful Blanchard garden under a warm August moon. George Hobson, who unknown to all, had made a vow after the '86 Reunion to always carry his music equipment with him, proceeded to enlist help to set up his keyboards and speaker and soon the old familiar songs were wafting across the neighbourhood. As one of Mary's neighbours said the next day, "The music was wonderful until the singing began!" At the Friday party, Jock Haliburton put in an appearance, and it was terrific to see him. Also great to see the Fitzpatrick brothers, John and Terry. John is in Ottawa and Terry is in beautiful Burbank, California, where he is a

surgeon. John's wife, Audrey, was with him and made a great addition to the '51 choir. She and John are avid dancers and travel all over North America participating in dance festivals. Other Friday night visitors were Stu and Ruth Allaby. Terrific to see Stu again after all these years!

All hands were on deck Saturday morning for an old English double decker bus ride around Halifax. Highlight of the morning tour was the stop at the Public Gardens. Everyone wandered around this beautiful site and Mary Lou and Peter Flanagan were noted seriously discussing the various varieties of flowers being grown. In the evening we enjoyed a chartered boat trip around Halifax Harbour. Halifax from the water at night is beautiful and to top it off we had the first of two fireworks displays...a terrific evening.

And then there was Sunday. At the crack of dawn (would you believe 10 a.m.!!) two bus loads left Halifax bound for the province's famous South Shore. Again it was a perfect day. On our arrival at Peggy's Cove there was a little fog that added to the photographers delight. Then on for visits to Chester and Lunenburg. Our last stop of the day - a little spot called Hubbards where we were to spend the evening and enjoy a lobster supper, entertainment, music and general revelry. The lobster race was especially popular with Janet (Purcell) Brown ending up as the jockey of the winning crustacean.

At the beginning of the dinner, we drank a toast to our departed classmates: Leslie Cole, Stan Colpitts, Ross Hennigar, A.G. MacDonald, Audrey MacMillan, Charlie Rinfret, Isaac Tuplin, Noreen Moncur, H.A.L. McLaughlin, Ted Booth, Peter Grainger, Dan Keenan, Gord Kinnaird, Michael Gills.

The final day of our Reunion started when 15 of us met on the wharf and cast off for a few shoals in outer Halifax Harbour! We jigged and jigged, laughed and told stories, but I regret to say didn't come up with many fish. Two of the more memorable events were Joan Craig catching a 6 foot length of rope (a new record) and Cecily excitedly pulling up her line to find only the fish's head looking at her. Joe Carr caught the first fish - a dog fish - junior edition of a shark.

The finale: an afternoon and evening party at Lorna and Bill's. John Baumbrough calling from the beautiful Okanagan Valley to send his greetings to the Class. What would be more fitting for us to send back over the telephone lines but a hearty "Fai!t Ye"! There was a grand march accompanied by the music "Marching to 'Victoria!'" with Mary Blanchard and Bill carrying the Reunion Flag, which ended with it being presented to Bill Spriggs our next Chairman. Bill Spriggs accepted the responsibility for arranging our 40th Reunion on June 25-28, 1991 - only 17 months away — in Victoria, BC.

All in all, a memorable event. The Class outdid itself and raised on high again the standards established at Mac 1947-1951. It was as if we had never parted. The friendships made then have endured and, if anything, have increased in intensity.

We are now one group brought together by chance at a small college, in a time when everything seemed more normal. We weren't affected by many of the problems facing young people today, and we were turned out into the world well prepared to seize the opportunities which were abundantly available.

All in all, we have been very fortunate: no wars to fight, and a marvellous growing environment. Certainly there have been problems, but our training from Mac and the people skills developed there have allowed us to prosper and grow and to overcome obstacles that may have been in our way. ■



The Halifax Reunion for the Class of '51 included an afternoon and evening party at Lorna and Bill Ritchie's.

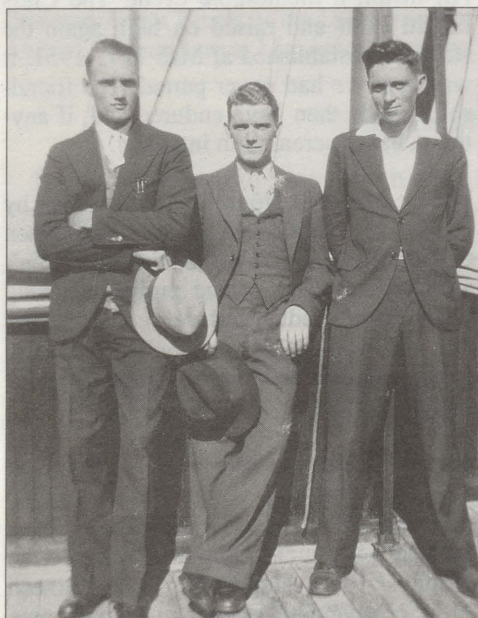
Beyond These Gates

The Making of a Teacher

Over the past few years we have published several articles on "Macdonald families," that is, families where two, three, four, and sometimes more members have come to Macdonald to study or have been associated in some way with the college. One such family is the McElroys of Dunham, Quebec, and one member of that family, Gordon McElroy, who now enjoys retirement in nearby Baie d'Urfé, has had a long and successful career. He talked recently with Hazel Clarke, for the Journal.

What makes Macdonald such a family institution?

It is because Sir William hoped that the college would represent the women, the farmers, and the teachers of the community. He saw those as being the most important people in the rural area and, as a result, the college had something to offer to 75 to 80 per cent of the young people who finished high school in the province.



Gordon McElroy, right, and fellow teachers enroute to Harrington Harbour on the SS Sable Island in 1935.

Your family background

I was born in Dunham and went to school there and to high school in Cowansville. At the age of 17 I came to Macdonald College to the one-year teacher's program. Before that my older sister Helen was here in 1925 and took a year of teacher training. She found that she disliked teaching intensely and went on to many other things. She has been a friend to many in the community through the church, the golden age club, and through driving people around. She filled in the role my father did after he retired. He kept an eye on people in the community who might need help.

My mother would have come to Macdonald had she been 10 years younger, but she graduated from McGill as a teacher around 1900. She taught for a few years and married. Her association with Macdonald was different and special. She was a Charter Member of the Quebec Women's Institutes with Dunham being the first branch formed in 1911. One of the highlights for us on the farm in Dunham was when mother got herself ready to come to Macdonald College to the Women's Institutes Convention. It was a big moment in her life, and she just loved it. She would come back with a picture half a yard long taken of everybody in front of the Main Building.

My brother Robert was here in the Diploma Program from '31 to '33. Lionel Hamilton was in charge of the Diploma Program, and he went out recruiting and came to our place. My dad was out in the field ploughing so he walked out to the field, introduced himself and put out his hand to shake hands with my father. Dad said, "I'm sorry I can't shake hands; my hands are too dirty." Lionel reached down, picked up a handful of earth and said, "My hands are dirty, too. Shake hands."

Robert was a successful farmer in St. Andrew's East. His farm was originally dairy, but he got tired of being on call for milk twice a day seven days a week. He had developed a very fine Jersey herd and sold it. He then went into beef cattle and had a lot of private

customers. He's now retired and living happily in Lachute.

Robert's son Arthur got his BSc from Macdonald College in 1971. He got his MSc from Laval and his PhD from Guelph. He is now a forage geneticist at Agriculture Canada's Ottawa Research Centre. He's doing some very exciting work on hybrid alfalfa.

Why a Teacher?

I didn't have the money to go to university; I didn't want to be a farmer. It was, therefore, the shortest and cheapest route to employment. When I graduated from Macdonald, teachers were plentiful and jobs were scarce, but I heard of one on the Lower North Shore. I sent a telegram off collect and got an answer back saying I was hired. A couple of weeks later at the age of 18 - and looking about 12 - I was off to the Lower North Shore where I taught Grades I to VII for two years. I lived on Gull Cliff Island for a few months, and then I moved to Barachois and Aylmer Sound. After the ice went out in the spring I went back to Gull Cliff Island to about 44 children, some of whom I had seen a few times during the winter.

It was a marvelous time. I enjoyed it so much. The people were so different from any I had ever met. I found their speech interesting. My mother wrote to me shortly after I got there and said she had had a letter from one of the women asking if she would send her some underwear for her dog teams. My mother asked if this woman was putting her on. In the wintertime the women spent all their time hooking rugs, and mats, and pictures. Some of the pictures were of dog teams which they did for the Grenfell Mission. They used old underwear which they dyed the colours of the dogs. What she wanted was very clear to Aunt Maggie, but it was less than clear to my mother.

I stayed with Uncle Joe and Aunt Irene Bobbitt on Gull Cliff Island. There was never any Mr. and Mrs.; they were always uncle and aunt. If they were your contemporaries,

you called them by their first name. When I was in Barachois I stayed with Uncle Tom and Aunt Grace.

Where next?

I went next to Maniwaki, Bedford, Farnham, and Drummondville. I taught for five years in mostly one-year stands. It was while I was in Farnham that I met Jean. She was visiting her roommate from the University of Toronto. We got married on New Year's Day in 1943. Many of your readers will remember Jean as she was with the Travelling Libraries Bookmobile for nine years. She has fond memories of those years.

I had joined the RCAF, trained as a navigator and went overseas in June of that year. I was on loan to the RAF and did some 39 sorties (a tour of operation) over enemy territory.

After the war I went to Queen's and graduated with a BA in French. While I was there I was offered the job of principal of Cookshire High School. I was in Cookshire for three years and looked after the administrative duties and taught French, English, Geography, and History. Next I went to Lennoxville as a French specialist and was there for four years. From there I went to Magog as principal and taught half time.

Back to Macdonald

A complete change came when it was suggested that I apply to Macdonald College for a job. Next thing I knew I was in the Institute of Education with Dave Munro as Director. I enrolled at McGill and did an MA in French Literature. In 1965 I was named the Director of the Summer School for Teachers. A couple of years later I was Associate Director of Continuing Education representing by then the Faculty of Education.

I had two offices: one in the French Department which later became the Department of Second Language Teaching and one in Continuing Education (now Extension). That was really a key time for us - we just sprouted in all directions. In 1967 we gave our first off-

campus courses. We had a very strong program in special education which we called Educating the Individual. Programs were developed in the teaching of reading, kindergarten, nursery school, music, and we gave at least some of these in all parts of the province, including the North.

The McGill Campus

We moved into McGill in 1970. I was asked about that time to draw up a design for summer school in all faculties, which McGill had never had before. I travelled across the country, drew up a plan, and presented it. It was accepted, and I was made the first Director of Summer School and remained in that job until 1975 when I took a sabbatical and gave up all my administrative responsibilities. During that time I had been Associate Director of Continuing Education, Director of Summer School, and Associate Dean, Faculty of Education.

I went to the University of Edinburgh for my sabbatical as a post-graduate researcher. I think it was the best year of my life up to that point.

When I came back I did nothing but teach. I retired in 1981 and almost immediately joined up with Canadian Executive Service Overseas (CESO). While it is supposed to be an overseas posting, my term was in Dorval at the Inuit School teaching English to adults.

Thoughts on Teaching

I got a great deal of satisfaction from teaching. I found Grade IX the best. The pupils were, in some cases, the hardest to handle as they were getting into the rebellious teenage area, but it presented a challenge: you gave them just so much rope and pulled it in if necessary. I think I got along best with that grade.

Today's teaching is more challenging. Most teach in much larger schools than I ever did. The high achievers, the highly motivated, the bright kids - they can do extremely well because there are all the avenues for them.



Gordon McElroy and Helen Neilson catch up on college news on the terrace of the Centennial Centre.

They have highly qualified teachers, equipment, laboratories, libraries - everything for those who can benefit by it and who are motivated. With this very large school population, however, there are a lot of students who just fade into the woodwork and are overlooked.

Looking Back

I enjoyed my days at Mac. I liked teaching. We liked living on the campus for five years, and our two boys have said since that it was the most wonderful place in the world to grow up in. Bill went to John Abbott College and to McGill. He taught here in Quebec and is now teaching at St. George's College in Toronto. He's married and has two children. In 1969 Tom was employed at Sir George Williams (now Concordia) and is now manager of technical operations in the audio visual department at Concordia in Montreal.

Jean and I keep busy. I go to the Ste. Anne's Hospital to see two or three patients once a week to cheer them up. I go every week to a senior's home and play the piano for a sing song. I'm an elder of the church and am also on the official board. I sing in the choir and tape the sermons for shut-ins and the Sunday School teachers who miss them. I'm a volunteer for the Morgan Arboretum and usually do French guided tours in the maple syrup season. Jean and I do meals-on-wheels once a month. We like to travel, and as long as I can carry a suitcase, I hope we can take at least one trip a year. ■

Diploma Corner

Keeping Busy, Doing Good

by Hazel M. Clarke

When he tells me he works full time with his parents on their Calumet Island cow-calf and feeder calf farm, I think, fine, that's enough to keep any young man occupied and, certainly, it allows time for the many community activities he's involved in. But when he doesn't stop to catch his breath but continues on "and I also work part time as an agent for Valley Mutual General Insurance Association, the Pontiac Journal, and I also have my own photography business," then I'm completely convinced that Paul Bertrand is a very busy young man, an achiever, and one who likes to live life to the fullest.

To add one more dimension to an almost full life, Paul got married last September to Martine Carrier, a nurse at the Pontiac Community Hospital in Shawville. They are now living about 8 km from the farm but plan to build their own house on the farm property this summer.

Paul says he only started to take a real interest in the family farm when he was in high school. His family, teachers, and guidance counsellors suggested that he continue his education in agriculture before going back to the farm. As Paul's mother had received her teaching diploma from Macdonald, she convinced Paul that he should enrol at Mac.

"Our farm is now management oriented, and we get much more production," Paul said. "I attribute this to my studies at Mac and to the willingness of my parents to discuss new ideas and innovations. Since I received my



Paul Bertrand and his wife Martine. Note the round bales in the background that Paul is very pleased with.

Diploma in 1983 we've discussed countless new ideas. We want to do what's best for the farm."

There are more beef farms in Paul's part of the province than any other type of production. The Bertrands have 244 ha and about 150 head of cattle. "We have a commercial herd and use all registered bulls. We have mainly Charolais cross cows, but we also have some Herefords and Aberdeen Angus."

When Paul returned to the farm, there were about 60 cows. He plans to keep the herd

at the present size which, at the time of writing, was 92 cows due to calve from February to April, about 10 to 15 replacement heifers, four bulls, and 40 feeder calves.

"We grow all our own feed," Paul said, "with 13 ha planted to oats and barley, 52 to hay, 135 are in pasture - 45 are untillable, and 40 in woodlot. The soil on the home farm is clay to clay loam; on our other farm it's sandy loam. Our feed is hay: 70 per cent alfalfa - timothy, 20 per cent timothy-birdsfoot trefoil, 10 per cent pure ryegrass; grain: 30 per cent oats, and 70 per cent oats and barley mix.

One innovation that Paul is very pleased with is round bales. "We started making them in 1986 and since then our hay quality has greatly improved. We store the bales inside."

With about 175 head to pasture, Paul said that last summer they decided to divide two pastures with electric fencing. "We are very impressed with the results," he said. "Pasture No. 1 was a 16 ha field with a couple of large gullies down the side. We divided it into three separate lots. The cattle were rotated from one to the other as was necessary - usually about every seven to nine days. Each lot had



▲ The Bertrands have a cow-calf and feeder calf operation. ▲



about two weeks to regrow after each pasturing. The key to good regrowth," Paul pointed out, "is to rotate before the pasture looks like a golf course. You need a good bottom left so the moisture is not lost and the pasture burns up. Even with the dry season we had in our area, none of the pasture stopped growing.

"Pasture No. 2 was a 9 ha field," Paul continued. "We divided it into two and fenced an adjoining woodlot to make three lots. We rotated the animals about once a week until mid June when we left one lot alone until mid July and then cut 75 round bales."

Registered bulls: Charolais for the cows and Hereford or Limousin for the heifers are used. Cows are culled mainly on the calves they produce. "Age is not as important as pounds of calf," Paul said. "We keep the top 10 to 15 heifers out of the herd."

Paul stresses that the most important part of a beef operation is calving. "In 1985 we built a 24 by 60 foot calving barn which is divided by steel gates. We have one large 22 by 30 foot pen for the cows that are about to calve and a 15 by 22 foot pen and two 11 by 15 foot pens for the new calves.



Shawville Young Farmers about to go for a sleigh ride. "My dad enjoys harnessing his team and taking the group for a ride," Paul said.

The cows in the calving pen can be seen from the house via closed circuit television that we installed in 1987. The calving pen can hold up to 10 cows. Each new calf is kept with its mother in a box stall for two or more days."

Paul said that running a beef operation is like any other business. "Production costs are steadily increasing. To be profitable the cow-calf operator has to be an increasingly better manager. Profits can be obtained, but it's difficult," he said.

There are about 12,000 head of cows in the region around Calumet Island, and Paul said that there are many marketing opportunities open to the beef producers. "We are about 25 km from the Ontario border. There's an auction yard in Cudden, about 40 km away and closer to home - 15 km - the UPA has a weekly electronic auction for cows and finished steers.

Paul and his family sell most of their cattle to buyers. "There are four buyers in our area that buy large numbers of cattle and ship them direct to feedlots in southwestern Ontario. This past fall the demand for our calves was higher than in past years."

"Beef consumption," Paul feels, "is going to remain constant over the next few years. The calorie-conscious consumer is responding favourably to increased promotion by the

beef industry and this pleases me. Leaner beef has improved the image and the marketing of the product."

Paul is also impressed by the Quebec government and said they are constantly working on new ideas and programs for the industry. "We are fortunate to be receiving this assistance," he said.

Down the road a year or so, Paul hopes to buy the farm from his parents. Meanwhile, he's happy with his full-time contribution to the farm. His part-time activities? As mentioned before, he's an agent for an insurance company, works for the Pontiac Journal, a local bilingual weekly, and runs his own photography business. Paul has been interested in photography since high school and was a member of the Photographic Society at Macdonald. He enjoyed working in the darkroom at Mac and has since built his own at home. He's now into colour developing, which he's enjoying. Paul takes photos for about four or five weddings a year.

Paul meets fellow Dips and other Mac grads, farmers and other members of the community through a wide range of community activities. To name a few commitments, past and present: 1987-88, 4-H director of the Ottawa Winter Fair, president, Shawville Young Farmers, and fieldperson and provincial director of Quebec Young Farmers; 1988-89, director, junior division, Pontiac Agricultural Society; 1987, '88, '89, regional director for Ontario Junior Farmers, 1988, a founding member and president of Pontiac Future Farmers, and 1990, fair board director in

charge of concessions.

Speaking of the QYF, Paul said, "It's an organization where people learn to work together as a group and everyone has the same goal, whether it be planning a meeting or organizing an activity. I got involved with QYF to improve my own knowledge and skills and to try to encourage other members of the club to improve theirs. The Shawville Young Farmers visit our farm every winter for a sleigh ride and campfire. Dad enjoys harnessing his team and taking the group for a ride."

Paul has received recognition for his service in various organizations: in 1986 he and fellow Dip grad James Howard were co-winners of the QYF Leadership Challenge Award. In 1987 he received the Outstanding Young Quebecers Award from Outaouais Alliance. Also that year he received the David Pilgrim Memorial Trophy from the Shawville Young Farmers and, in 1988, he received the QYF Leadership Challenge Award.

Paul is a member of Alliance Quebec and he and his wife Martine read the lesson at the church they attend regularly.

A full life, Paul Bertrand. A credit to your family; a credit to your community. The future looks good: the family farm is in good hands and the community can only be strengthened by your commitment to it. ■



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The Quebec Women's Institutes



President's Message

It's hard to believe that another year in Quebec Women's Institutes will soon

be gone. Our Convention in May starts another year of provincial activities. What does the future hold for us? Where do we fit in this fast-paced high tech world? Our priorities remain basically the same — to educate, encourage, promote and help rural women here and around the world. We have widened our circle to include over 70 countries that encompass many colours, creeds, religions and a full range of economic standards and life styles from the very well-to-do to those in the deepest depths of poverty and despair.

Yes, poverty and despair still exist, and we are still badly needed to help promote an acceptable standard of living. How do we define standard of living? To millions of people it means different things. I would like to hear from all readers of *The Macdonald Journal* for the answer to the question "What do you consider an acceptable standard of living?" Send your replies to: Quebec Women's Institutes, Box 58, Macdonald College, 21,111 Lakeshore Rd., Ste Anne de Bellevue, Quebec H9X 1C0.

Quebec Women's Institutes along with Federated Women's Institutes of Canada and the Associated Country Women of the World are very concerned about our environment (everyone's environment). Wrapping is a big business today but not necessarily a good business. Can we turn back the ecological clock or find alternatives to eventually give us a safe environment: Not unless we are prepared to give up some of the conveniences that we have come to take for granted. We must start somewhere with a little and continue until we have accomplished something worthwhile. The first step is the beginning of a long road to success. Until next time,

Pearle Ingalls Yates

Joan Griffith, Provincial Convener International Affairs

I grew up on a farm in a mostly French-speaking area as Joan Oswald and graduated from the then Lachute High School. I went to Sir George



Williams Secretarial College in Montreal and worked in the city for 7 1/2 years until I married my husband Rexford Griffith and moved to Lachute. We have two sons Mark and Gordon. They are both graduates of Carleton University and are employed in their own fields of endeavour.

I have been a member of the Upper Lachute East End WI for 13 years. During that time I have served as Branch President, Branch Convener of Education and Cultural Affairs, and am again serving another term as President. I have been Argenteuil County President and am now enjoying a term as Provincial Convener of International Affairs.

As well as being involved in WI work, I am also an active member and Recording Secretary of the Lachute United Church Women and also serve as Superintendent of Sunday School. I like to relax by working at handicrafts. I do a lot of quilting, mostly king and crib sizes. I also knit, sew, sketch, and am a member of our local as well as the Beaconsfield Hooker's Club (rug hooking).

The Frances B. Taylor Memorial Fund

The family of Mrs. Taylor has asked the QWI to administer the fund established in memory of Mrs. Taylor. A committee has been established consisting of Mrs. Rheta Taylor of Stanstead, Mrs. Gwen Parker of Rock Forest, and Mrs. Doris Stevens of Richmond. They will meet with a representative of the Taylor family to set up a bursary. Donations to the fund continue to be received by Mrs. Stevens, our Provincial Treasurer, at Box 671,

Richmond, Que., JOB 2HO. We are proud to be asked to administer the fund, a fitting tribute to a deeply committed member of the Women's Institutes. We thank all who have paid tribute to Mrs. Taylor, and we send a special thank you to the Taylor family for their support.

Alexandra Jenkins
QWI Secretary

Safety First by Elsie Prevost



Indoor Pollution: How to safeguard your health against it

If you can smell it and it's not on the stove, chances are it isn't good for you. Recent studies conducted by the Environmental Protection Agency (EPA) show that, in many cases, air pollution is heavier - and healthier - indoors than it is outdoors.

Poor ventilation is a contributing factor. Don't keep your home sealed like a tomb, letting the stray chemicals, dust, fumes, and cigarette smoke hang heavily in the air. Open the windows and let the air escape. You'll feel better and breathe more easily. But the main causes of indoor air pollution are the sources of the chemicals themselves. Remove as many sources as possible and safeguard your health.

Cigarette Smoke contains 1,500 known chemicals. Even if you are a non smoker but live and work with a smoker, you are being exposed to these chemicals. If somebody in your family hasn't kicked the habit, force them to light up outside or at least by a window or exhaust fan so that some of the harmful pollutants can escape.

Can't smell the fish frying through the wonderful scent of pine trees drifting through your kitchen? Wrong, you can't smell the fish

frying through the unhealthy levels of paradi-chlorobenzene floating out of your solid or aerosol air fresheners. There is no reason to keep air fresheners in your house. All they may be doing is sending a concentrated level of cancer-causing chemicals into the air. To be safe, throw out your air fresheners. You can open windows or use recirculating central air conditioning units to keep your house smelling fresh without risking your health by inhaling harmful chemicals designed to smell like a pine forest.

Dust We track lead into our homes on our shoes. It gets picked up in the dust and floats throughout the house where we can inhale it. Babies crawl on the floor, get it on their hands, lick it off, and ingest it. Maybe we should take a lesson from the Japanese and take our shoes off every time we enter the house. Doing that would keep many pollutants outside of the home. Dust and vacuum frequently. Do not allow dust to accumulate.

Pontiac Women's Institutes Focus on Industry and the Environment

So read the headline in *The Equity*, February 28, 1990, when approximately 60 guests and members of the eight Women's Institute branches of Pontiac County attended a day-long information seminar on February 23, 1990.



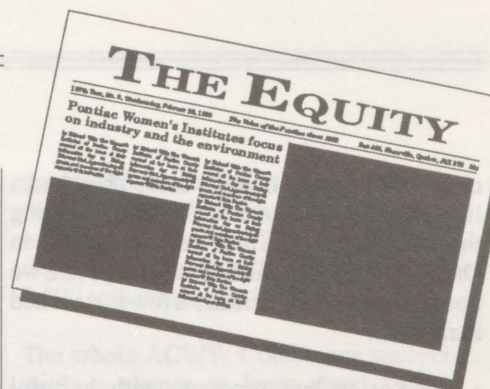
Tom Gray, left, General Manager of Stone-Consolidated's Pontiac pulp mill, and the mill's Technical Superintendent Terry Sidock, right, gave an informative presentation to the Women's Institutes of Pontiac County on Friday, February 23rd. With them is Pontiac County WI President Eileen Colton of Fort Coulonge.

A talk and demonstration on a wide variety of handicrafts was given by Rita Beimers, and Lucy Brownlee spoke about the progress of her home care agency.

General Manager Tom Gray and Technical Supervisor Terry Sidock from the Stone-Consolidated pulp mill at Portage du Fort discussed the environmental side of their industry. Mr. Sidock said that the pulp and paper industry had long suffered from an unwillingness to address the public's concerns about the effects of pulp mills on the environment. The past's "no comment" has changed with his company's new environmental policy. The company recognizes that it is in its own best interest to help protect the towns, farms, and forests of the surrounding area.

In discussing the sulphur smell associated with pulp mills, he said his company will switch to a low-odour type of recovery boiler within the next five to seven years. The cost of the changeover will amount to \$15 to \$20 million. Discussing the wastes that are pumped into the the Ottawa River, Tom Gray said that the mill's annual water tests showed no difference between water quality downstream from the mill and that upstream. He said that the pulp and paper industry is only eighth or ninth on the list of Canadian industries emitting dioxins or furans into the environment. "We're not going to say there's no problem, but we're corporate citizens, and we're here for a long time, not just a good time."

Frank Finley from the Chalk River laboratory of Atomic Energy of Canada Limited spoke on the benefits and dangers of radioactivity. He reminded his audience that radiation occurs naturally, being emitted from the earth and generated in the sun. He described nuclear as clean energy, especially when compared to the alternatives. He cited environmental predictions that the next decade would decide whether humans will survive or perish on the planet. He calculated that nuclear fission was second only to hydro electricity as a source of clean energy because all other sources depend on



combustion to produce power.

"The days of burning are coming to an end or we are not going to make it," he said. "Our business at Chalk River is saving lives," he said and discussed the uses of radiation such as microwave ovens, medical treatments, and irradiated food. In an effort to put radiation danger in perspective, he calculated that the average dose of radiation from natural sources is 200 units per year and the average lethal dose 600,000 units. In discussing the future, Mr. Finley said the industry is banking on new discoveries to make their technology completely safe.

Carolyn Knox
Pontiac County

Argenteuil to Have Environmental Convener

The nine WI branches in Argenteuil County are planning to have a special convener for the environment. Some of the groups in Lachute are working - as a start - on trying to help clean up the North River.

We have also been busy having speakers come to our meetings, making us much more aware of how serious this problem has become.

In February the high school students put on a program at the school and the public was invited. They did several skits on the environment and pollution which they had written themselves. One was entitled "What on Earth are We Doing?" It was really excellent. They had some excellent handout material: a "Test Your Environmental Knowledge" survey completed by parents and students and answers to a series of questions asked of municipalities, firms, and government offi-

The Quebec Women's Institutes

cials in the school board's area. They had a list of audio-visual material about recycling that was available from various places in Ontario, and a pamphlet on enviro-tips that we could all consider. Here are a few tips picked at random:

- try not to buy products with harmful packaging;
- buy items in bulk;
- purchase eggs in paper cartons;
- stay away from clothes that need frequent dry cleaning;
- clean the lint screen in your dryer frequently;
- use sponges and rags rather than paper towels.

Agnes Morrison
Argenteuil Publicity Convener

Recycling is IN at Aubrey Riverfield WI

Last spring one of our members, Audrey Reddick, invited Suzanna Letourneau and Teresa Caza of the RRR (Recycle-Reduce-Reuse) Program in Havelock to come and speak. Following the meeting, a committee was formed to see what we could do. Audrey Reddick chaired the committee, with Jean Furcall and Chris Morris as members.

Several members attended council meetings at Howick and Tres St-Sacrement last fall and again this spring. To celebrate the 75th Anniversary of the incorporation of Howick as a village, our members suggested Howick sponsor a recycling program. They, in turn, suggested the WI undertake the project, and on April 7, 1990, we sponsored a newspaper drive. Residents were asked to bring newspapers to the Howick Fire Hall. The newspapers are to be shredded and used as litter at Shangri-La, a home for unwanted animals in Franklin Centre. We used lots of bilingual posters and advertised in the local newspapers.

A number of Aubrey-Riverfield members also attended a "RRR" meeting in Havelock. It was an information meeting on the disadvantages of incineration of garbage. Incineration produces toxic ash, and it is consi-

dered ecologically better to recycle. A number of citizens in the Chateauguay Valley are opposed to the planned incinerator in Valleyfield.

Jean. S. Cogswell
Publicity Convener, Aubrey-Riverfield WI

The Green Decade

It was appropriate that Frontier's February meeting had an environmental slant as we head into what some have called the "Green Decade." The meeting's motto "Reduce, Reuse, Recycle" and the answer to roll call "What am I doing to improve the environment?" set members to serious thinking.

We passed a motion to draft a resolution for a new convener under the heading "Environmental Issues." The purchase of recycled paper products was also discussed. The speaker for these important concerns was David Oxley, a teacher of natural resource management at Vanier College. Mr. Oxley's teaching involves the use of the field station at Black Lake in Dunany. He also used the slogan "Reduce, Reuse, Recycle." When speaking on reducing, he used the razor as an example and what he referred to as lunch bag ecology. He traced the history of the razor from grandpa's straight to the disposable razor used today. He showed how not only was it not environmentally sound to use an overpackaged disposable but in comparison to a safety razor it was also not cost efficient.

Lunch bag ecology is an easy way to do our bit. He explained that once again one time use products such as sandwich bags are not necessary. All of us have a kitchen cupboard devoted to reusable plastic containers that would be put to better use in storing food. Tuck a string bag into your purse before going shopping and present it at the cash instead of using plastic bags. Mr. Oxley said that the government sponsors programs through Environment Canada.

Rosemary O'Neill-Fields
Frontier WI Secretary

The Environment: What is WI Doing?

Brookbury puts their papers in the grocery where they shop. **Cleveland:** paper and plastic bags are given to local fruit and vegetable stand for their produce; papers to the local paper drive for recycling, and members are encouraged to use their bags in garbage cans instead of using purchased ones. Members are also encouraged not to use aerosol cans. **Howick** WI has a twice yearly glass drive and a cardboard recycling project. (see *The Macdonald Journal*, Fall 1989). **Kinnear's Mills** wrote to their municipal council and were successful in getting a depot. **Lennoxville** wrote town council voicing needs for depots for recycling glass, plastic, and cans. Paper is already collected. Following this, a delegation of members attended an environment meeting. **Missisquoi County:** all branches discussed the environment and some have written their municipal council. **Stanbridge East** collects newspapers, but only black and white print as before paper can be recycled all the ink has to be removed. Clear glass jars and bottles - washed - are taken to Noyan and are then transported to Montreal. Large vinegar or plastic jugs that have not contained a strong solution are used for carrying water, tin cans are washed and crushed. When packing, put newspapers in brown shopping bags, plastic in plastic bags, tins in boxes. **Richmond County** was to have a speaker on the environment in mid March. All branches have roll calls pertaining to this topic and show concern at not having nearby depots. **Valcartier:** recycling of cans, paper, and glass is being carried out, but material has to be taken to St-Foy as they have no local depot. Oil spills to be picked up immediately and yards, backyards, and basements kept free of garbage and debris.

There is a great need for extended education in the schools, homes, and for the public on this subject. It is hoped that 1990 will see a more active role in the fight against pollution.

Barbara E. Harvey
QWI Publicity Convener

Flint Hill Ranch Tour

On September 26, while attending the ACWW Conference in Kansas City, Missouri, I was most fortunate to be able to take a bus tour to the Flint Hills of Southwest Kansas. This area of Kansas is an agricultural and environmental area protected to the highest degree. We headed southwest down the Kansas turnpike (Interstate 35) which was the old Santa Fe Trail. This was known as Indian Territory and our destination was Council Grove where the white traders and settlers signed a treaty with the Indians in 1825, granting them the use of the trail. The Indians respected the treaty as long as the people used the trail, but if they strayed, they were fair game.

Kansas State is the 14th largest in size and is the second largest in miles of road. The United States attained this area by the Louisiana Purchase paying three cents an acre. Kansas sows thousands of acres to wheat, soybeans, and milo and is the number one producer of wheat in the nation. They also slaughter more beef than any other state in the Union - 3,000 a day six days a week - giving employment to 1,600 people. The gall stones are shipped to Asia where they believe ground gall stones enhance sexual powers. They sell for \$3,000 to \$4,000 a pound with a good hide bringing \$80.

We lunched in Council Grove, so named because this is where the treaty was signed. While there we had lunch at the Hays House, which was built by Seth Hays in 1857 on the site of the original log cabin built in 1847. It is the oldest continuously operating restaurant west of the Mississippi. It was also used as a post office, courthouse, tavern, church, theatre, printing office, and hotel that knew such guests as General George Armstrong Custer and Jesse James.

After lunch we headed out of town and turned onto a dirt road that took us deep into the heart of the Flint Hills to the ranch of Tom and Virginia Moxley. Thousands of buffalo, antelope, and elk once roamed the Flint Hills. After the Civil War and the wild days of the

Texas cattle drives, it became famous as a feeding ground for beef cattle. Today over 300,000 head are shipped in each spring from the southwest states. Every summer more than one million head are fattened on the nutritious grasses. There are 4 1/2 million acres of pasture which extend from the north to south across Kansas in a narrow oval two counties wide. They comprise the last large segment of true prairie which once stretched from the forest of the East to the great plains. Properly they are known as the Flint Hills, but they are better named after two prominent grasses, the big and the little blue stem: grasses so rich that in few other regions can so many cattle be concentrated.

In the Flint Hills the soil is very shallow over flint shale. To plough and plant it would be to destroy the nutritious grasses. The Flint Hills are maintained in the same way as they were when millions of buffalo roamed and thrived there. The Indians set fire to the terrain to drive the buffalo to them for slaughter. This cleaned the land of weeds and low brush and rejuvenated the grasses. Today the ranchers set fire to it every year or two in the same manner the Indians did. Beef cattle will graze a burned out area before they will start on unburnt terrain.

Tom and Virginia Moxley bought their ranch of 4,000 to 5,000 acres from his parents when interest rates were high, and they have found it difficult to survive economically. Tom leases land for grazing, giving him a total of 25 - 30,000 acres. The thing that saved them financially was Virginia's job as Dean of Human Ecology at Kansas State University. There are oil wells on the land, but the government owns the mineral rights and since they are shallow wells and not high producers, the income from these is minimal.

Tom Moxley's family came in 1873 and homesteaded along with the Indians because in reality it was the Kaw Reservation. The family started with Percheron horses. Now it's all beef cattle and a few quarter horses for herding. There is some bottom land where Tom sows milo, corn, and wheat. They winter 1,500 to 2,000 head of cattle for other

people on corn and milo mix. In April the cattle are turned out to graze. He expects an animal to gain 150 - 200 pounds in a 95-day period. Tom Moxley maintains from 7,000 to 8,000 steers for himself.

The whole ACWW Conference was certainly a chance to learn about "what's happening now" in the world of women, but the day I spent in the Flint Hills of Kansas was an agricultural bonus. I would like to express my heartfelt thanks to the Ministère de l'Agriculture, des Pêcheries et de l'Alimentation for their generous financing of my expenses to attend this conference.

Pearle Yates
QWI President



Valcartier WI members at the Fall Fest, l to r, Jeannine Constantine, President, Elsie Prevost, Publicity Convener, Myrthel Oliver, and Vivian Smith, Home Economics and Health Convener.



Members of Wyman WI presented a skit at their July picnic.

Newsmakers

On Campus

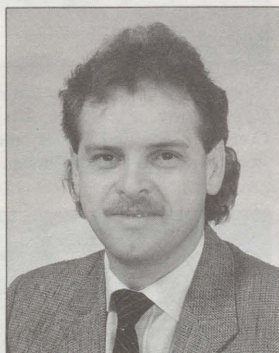
RANDALL WESTGREN, Chairman of the Department of Agricultural Economics, has been named a member of the Task Force on Competitiveness in the Agri-Food Industry. This is one of the four government-industry working groups established by Agriculture Canada following the national agri-food conference last December.

DHAS Director

MICHEL BARRÉ was recently appointed Director of DHAS Inc. He had been Interim Director since last March. Mr. Barré, who has a bachelor's degree in administration from the University of Sherbrooke, has held several positions in both the private and para-private sectors.



DHAS, which was started at Macdonald College in the early 60s, is now a joint venture between McGill University, the Federation des Producteurs de Lait du Québec, and the Société Québécoise d'initiatives agro-alimentaires. McGill is currently the major shareholder, but between now and 1994 the majority will be transferred to the Federation and DHAS Inc will become the property of its users, the dairy producers.



BERTRAND FARMER, BSc(Agr)'80, MSc(Agr)'85, has been appointed nutritionist with DHAS Inc. Before joining

DHAS Mr. Farmer was teaching at the Institut de Technologie Agricole in St-Hyacinthe. Prior to that, he had been on staff in the Diploma in Agriculture Program here at Macdonald.



Some of the past and present members of DHAS with Dr. John Moxley at the Agricultural Hall of Fame ceremonies in Toronto last fall: l to r, Dr. Brian Kennedy, Dr. John Moxley, Dr. Humberto Monardes, Robert Moore, and Yvon Rioux.

Off Campus

As a follow-up to the national agri-food conference held last December, Agriculture Minister Don Mazankowski has announced that several government-industry groups have been set up to follow up on conference discussions. Several Macdonald graduates will be members of these groups. The Farm Finance and Management Task Force membership includes GORDON MacEACHERN, BSc(Agr)'57, for PEI, and ROBERT ADAMS, BSc(Agr)'69 for Nova Scotia. Gordon MacEachern will also represent PEI on the Task Force on Competitiveness in the Agri-Food Industry, the Federal-Provincial Safety Net Committee, and the Transportation Committee. DR. DAVID LEES, BSc(Agr)'65, MSc(Agr)'67, is on the Competitiveness Task Force, representing one of the Processors, Maple Leaf Mills. The Safety Net Task Force members include ARNOLD ROVERS, BSc(Agr)'67, for Nova Scotia, and BRIAN DYKEMAN, BSc(Agr)'72, for New Brunswick.

When this issue of the Journal is in print, one of three Macdonald grads will be the new President-elect for the Agricultural Institute of Canada. Accepting the

nomination for the position were: FREEMAN L. McEWEN, BSc(Agr)'50, Dean of the Ontario Agricultural College, NORMAN C. LAWSON, MSc(Agr)'58, PhD'61, a professor in the Department of Plant Science at Macdonald College, and ROLAND L. HAYMAN, BSc(Agr)'66, Executive Director of the Agricultural Services Division for the N.S. Department of Agriculture and Marketing.

Several Macdonald graduates were involved in the recent restructuring of the N.S. Department of Agriculture and Marketing. RICHARD HUGGARD, BSc(Agr)'58, who was Executive Director in the Administration Branch, became Executive Director of the Administration Services Division. ARNOLD ROVERS, BSc(Agr)'67, formerly the Director of Agricultural Development and Credit Services, will be the Executive Director of the Agricultural Development Division. JOHN REDDEN, BSc(Agr)'66, is the director of the Animal Industry Branch, formerly Livestock Services Branch. DAVID SANGSTER, BSc(Agr)'66, former Director of the Horticulture and Biology Branch, is now Director of the Extension Services Branch. ROLAND HAYMAN, BSc(Agr)'66, former Director of Extension Service, is the Executive Director of the Agricultural Services Division. ROBERT ADAMS, BSc(Agr)'69, a former Supervisor of Agricultural Loans, is now Director of a Land and Credit Services Branch. Mr. Adams is also the Chief Executive Officer of the Nova Scotia Farm Loan Board.

WILFRED McCUTCHEON, BSc(Agr)'42, received the Honorary degree of Doctor of Education from Brandon, Manitoba, and delivered the Convocation Address.

KEITH RUSSELL, BSc(Agr)'48, retired last November from his position as manager of Co-op Atlantic's Agricultural, Marketing and Development Division.

LORNE McFADDEN, BSc(Agr)'49, MSc(Agr)'50, has retired from the Nova Scotia Agricultural College where he had

served as head of the Department of Biology from 1972 until 1989.

EDGAR J. LeROUX, MSc(Agr)'52, PhD'54, DSc'73, was awarded a Senior Officer's Retirement Certificate by Her Excellency the Governor General, Jeanne Sauv  at Government House in Ottawa.



BYRON E. BEELER, BSc(Agr)'58, has been elected Vice-President of the Royal Agricultural Winter Fair for a two-year term. Byron Beeler has been a volunteer at the Royal every year since 1958. He started in the Fruit and Vegetable area, later Field Crops, 4-H activities and, for the last three years, has been the Chairman of the Long Range Planning Committee. Bryan Beeler is also President of the Ontario Institute of Agrologists, chairs the Public Affairs Committee of the Crop Protection Institute of Canada, and also serves on the executive of the Canadian Agricultural Hall of Fame. He is Vice-President, Agricultural Division at CIBA-GEIGY Canada Ltd.

DAVID H. LEES, BSc(Agr)'65, MSc(Agr)'67, was appointed Vice-President, Development, Maple Leaf Mills Ltd.

JIM GENDRON, BSc(Agr)'74, recently became a partner in the Equus Consulting Group Inc., in Edmonton. This group specializes in public involvement programming, strategic planning, and management and customer services training.

MORRIS SAMSONOVITCH, BSc(Agr)'75, MSc(Agr)'78 opened a small animal clinic - the Kingston Road Animal Hospital - in Toronto.

WELDON SMITH, BSc(Agr)'75, has been named agricultural representative for Hants County, N.S.

HUGH MAYNARD, Dip'78, managing editor of the Quebec Farmers' Advocate, was, for the second year in a row, honoured at the annual meeting of the Canadian Farm Writers' Federation (CFWF) last December. Hugh was named recipient of the George Atkins Professional Development Grant and was elected to the CFWF Board of Directors as member-at-large for eastern Canada. The grant will enable Hugh to travel to the annual conference of the International Federation of Agricultural Journalists in Uppsala, Sweden, in August 1990.

DANIEL DUBREUIL, BSc(Agr)'79, was appointed assistant researcher in the Department of Pathology and Microbiology, Faculty of Veterinary Medicine, Universit  de Montr al.

DR. NANCY L. CROWE, BSc(Agr)'81, MSc(Agr)'84, sends news from NSAC: "Prior to joining the Nova Scotia Agricultural College last fall, I spent a couple of years working with Alberta Agriculture as the Food Scientist at the Alberta Special Crops and Horticultural Research Center." (Some of our readers may have heard Nancy on CBC Radio's "The Food Show" last year when she did an interview with Bruce Steele on a chewy carrot leather snack food which she developed as a potential use for cull carrots.) Nancy is now in the Chemistry and Soil Science Department and "I am teaching courses in instrumental and food chemistry. Our department is offering a new Food Laboratory Technology Program to train students in the areas of food safety, food analysis, and food processing. I am becoming intimately involved with the Program and in purchasing new state-of-the-art food analysis equipment. I am looking forward to establishing a new research program which will

address food chemistry concerns of the Maritimes. As I grew up on a dairy farm in Nova Scotia and started my university education at NSAC, this is a return to my 'old stomping grounds.'"

NEIL BURNS, Dip'82, and Marlene Cairns were recently engaged and are planning an August wedding.

Major Scholarship Winner

DENNIS MILLETTE, BSc(AgrEng)'82, MSc(AgrEng)'90, has been awarded one of three \$7,500 North American Life Scholarship Awards for the 1989-90 academic year. The North American Life Scholarship winners are selected by the Canadian Council of Professional Engineers on behalf of the 12 provincial associations that form the council.



The program, which is open to all Canadian engineers who are members of their provincial association, is designed to encourage professional excellence through graduate studies at leading universities. Since the competition's inception in 1973, over \$269,500 has been awarded to 69 winners. Dennis Millette is currently studying for his PhD in Environmental Hydrogeology at the University of Waterloo, specializing in groundwater contamination by agricultural chemicals. In the photo, Dennis, centre, is seen with his mother and Urgel Delisle, Eng.,

News

President of Urgel Delisle & Assoc. Inc., a Quebec agricultural engineering consulting firm.

RICHARD HART, BSc(Agr)'83, is now field sales supervisor for Quebec for Upjohn Animal Health. He was sales representative for five years.

DONALD McQUEEN SHAVER, DSc'83, was inducted into the United States Poultry Industry Hall of Fame. Dr. Shaver was the first non academic Canadian to be so honoured. His portrait has been hung, along with 60 others, in the National Agricultural Library in Beltsville, Maryland.

CAROL BOYD, BSc(Agr)'84, is now a partner in a feed dealership in Alliston, Ont. DANA PATTERSON, BSc(Agr)'84, has joined his brother ERIC PATTERSON, BSc(Agr)'79 on the family dairy farm at Wolfville Ridge in the Annapolis Valley. Dana had been working for Shur Gain.

ANGUS MACKINNON, Dip'84, is one of eight English-speaking community representatives named to a provincial advisory committee whose mandate is to advise the government on the development, implementation, and follow-up of plans aimed at improving access to Quebec's public service. The Minister responsible, Daniel Johnson, said the committee should be able to present recommendations before the end of 1990. Russell Williams, the MNA for Nelligan, assisted in setting up this advisory committee.

RICHARD ROGERS, MSc(Agr)'86, has been appointed apiculturist/tree fruit entomologist with the Kentville Plant Industry Branch of the N.S. Department of Agriculture and Marketing. He was previously employed as an apicultural specialist in Truro.

Congratulations and best wishes to two Dip'88s: PHYLLIS DANFORTH and ALAIN ROULEAU who were married in the Townships on April 7, 1990.

MARKUS MUELLER, Dip '88, dropped into the Diploma and Extension offices while attending QFA Dairy Day recently. He discussed his most recent visit to the Royal in Toronto when he showed his own cattle for the first time. As there are no other herds of Brown Swiss in his home area of Huntingdon, Markus had not shown locally. He had shown for other people at the Royal but he said showing his own cattle was special. Markus took four animals to the Royal and showed three. His two-year-old placed first; the mature cow placed third and was also the total performance winner. Markus told us that last year she had the all time Canadian milk record. His heifer was 12th out of 23.

Deceased

WILLIAM DREW HAY, BSA'20, Teacher's Diploma'20, in Calgary, Alta., on March 24, 1990. Born in Lachute, Que., Mr. Hay enrolled in the BSA program. His education was interrupted when he enlisted in 1915 and served overseas - 1916-1918 - with the McGill Siege Battery. He returned to Macdonald College and graduated with a BSA and a teacher's diploma. He was assistant superintendent and research officer at the Dominion Experimental Station in Lethbridge (1924-1959). Mr. Hay contributed a great deal to farming in southern Alberta through his work on developing new varieties of field crops, putting them into production, and encouraging the production and use of high quality seeds. For some years after his

retirement he was secretary-treasurer and in charge of the farm and ranch sales of the family company, Hay Realty Ltd., with his son Douglas Leonard, BSc(Agr)'57, acting as president. The company has been in operation for 30 years, is now known as D.J. Hay Enterprises Ltd.

ROBERT JACK, BSA'30, from Chateaugay, Que., on September 10, 1989.

KATHARINE ADELAIDE (MUNN) ROBERTSON, BHS'38, of New Lambton, New South Wales, Australia, on March 22, 1990. Mrs. Robertson was head of the dietary services in New Carlisle General Hospital, N.S.W., for many years and was highly regarded in the dietetic profession.


EUGENE H. LANGE, MSc(Agr)'39, of Winnipeg, Man., in May 1989.

DR. ALLEN P. JAMES, BSc(Agr)'41, MSc(Agr)'43, of Ottawa, Ont., on September 4, 1989.

VAL MORRISON SWAIL, BSc(Agr)'48, of Alton, N.S., on February 10, 1990.

JAMES E. LANGILLE, BSc(Agr)'49, in Amherst, N.S., on November 24, 1989.

RICHARD E. DEAN, BSc(Agr)'50, BSc(Agr)'51, of Kamloops, B.C., on December 11, 1989. ■



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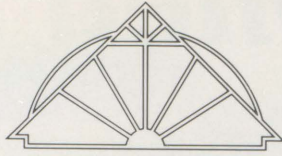
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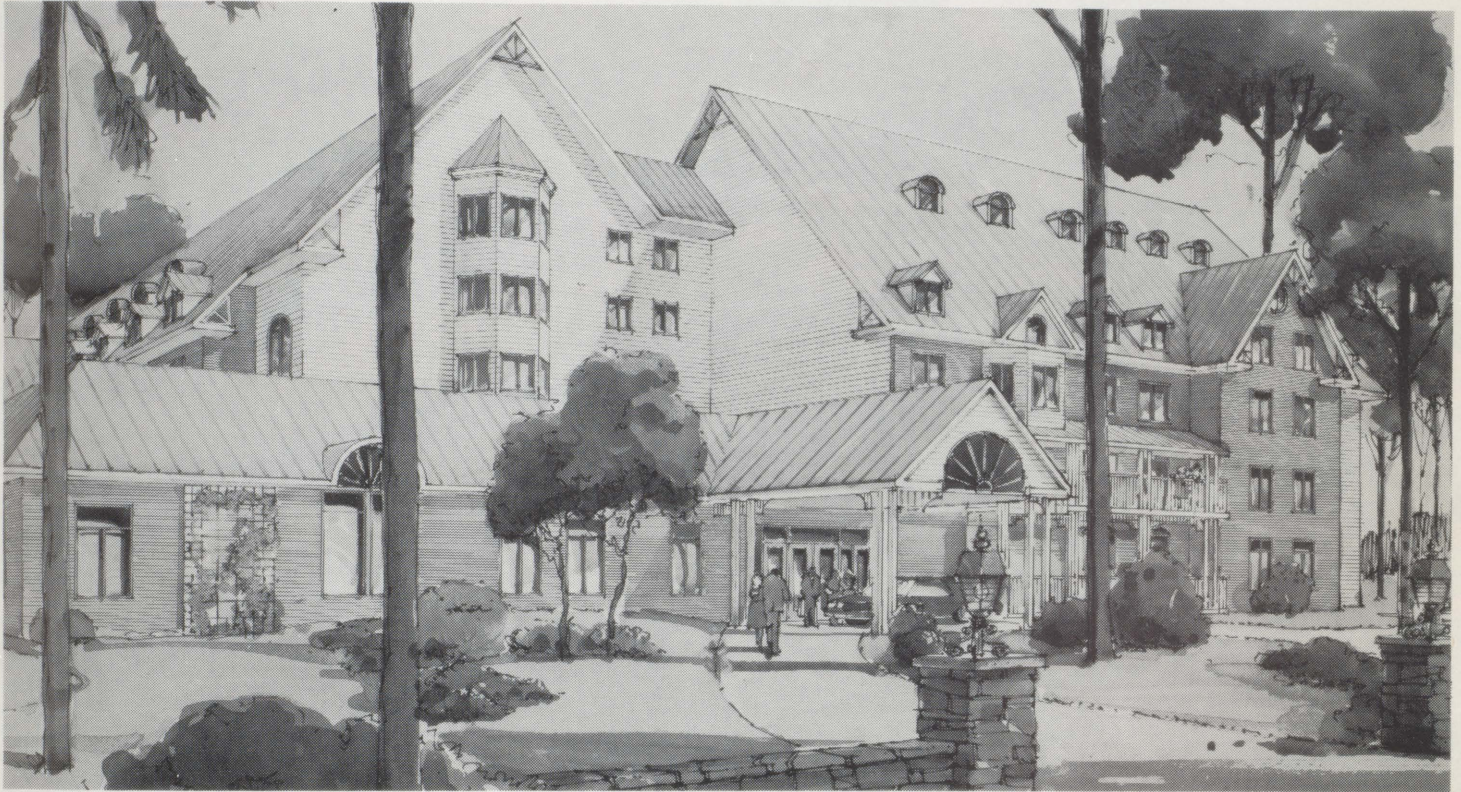
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